

KH-8855 KU

CASSETTE-AM/FM STEREO
COMPACT SYSTEM

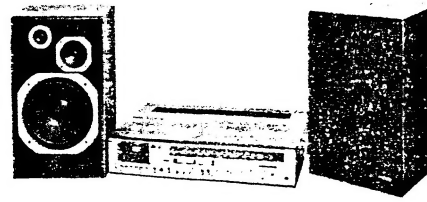
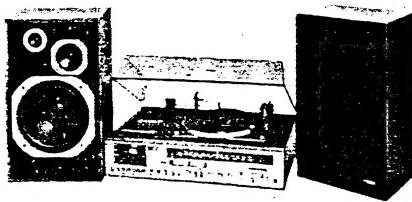
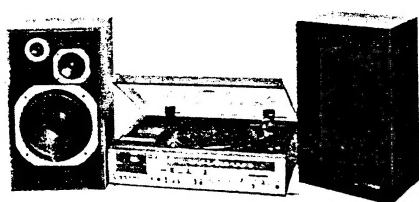
KH-8833 KU

CASSETTE-AM/FM STEREO
COMPACT SYSTEM

KH-858 KU

CASSETTE-AM/FM STEREO
COMPACT SYSTEM

SERVICE MANUAL



NOTICE: The photo shows the speaker system of Model CL-70.

CONTENTS

1. Specifications.....	1	13. Main Amplifier Unit	28
2. Parts Location.....	2	14. Player Unit (KH-8855)	30
3. Circuit Description.....	2	15. Miscellaneous Parts List.....	31
4. Disassembly.....	4	16. Cabinet Exploded View.....	32
5. Adjustment	4	17. Chassis Exploded View.....	34
6. Dial Stringing.....	10	18. AF Amp Exploded View	36
7. Schematic Circuit Diagram	12	19. Player Unit Exploded View (KH-8855)	38
8. AF Amplifier Unit.....	18	20. Packing Method	40
9. Tuner Unit	22	21. Cassette Mechanism Exploded View (Top)	44
10. Mic Amplifier Unit	25	22. Cassette Mechanism Exploded View (Bottom)	46
11. Control Unit.....	26	23. Check Points of Cassette Mechanism	48
12. Sensing Unit (CWX-288).....	27		

CENTREX
by PIONEER

1. SPECIFICATIONS

Amplifier

Power output Continuous power output of 22 watts per channel, min. at 8Ω from 40 ~ 20,000 Hz with no more than 0.7% total harmonic distortion.

PHONO frequency response

(RIAA equalization) 70 ~ 15,000 Hz \pm 0.7 dB

Input sensitivity/

impedance PHONO: 2.5 mV/50 k Ω
AUX: 150 mV/30 k Ω
MIC: 3.5 mV/5 k Ω
TAPE MONI.: 150 mV/30 k Ω

Output level/

impedance REC OUT: 150 mV/3 k Ω
HEADPHONE: 8Ω
SPEAKER: 8Ω

Tuner section

FM

Frequency range 88 ~ 108 MHz

Usable sensitivity 10.7 dBf (1.9 μ V)

50 dB quieting

sensitivity 17.2 dBf (4 μ V, mono)
39.2 dBf (50 μ V, stereo)

Stereo separation 45 dB (at 1 kHz)

Capture ratio 1.0 dB

Selectivity 60 dB

Signal-to-noise ratio

(65 dBf) 70 dB (mono)
65 dB (stereo)

AM

Frequency range 525 ~ 1,605 kHz

Usable sensitivity 160 μ V/m (Bar antenna)

Selectivity 25 dB

Turntable section (KH-8855)

Wow and flutter 0.08% (WRMS)

Speed 33-1/3, 45 (rpm)

Platter 320 mm diam. aluminum alloy die-cast

Drive system Belt-drive

Motor FG-servo DC motor

Pitch control range \pm 2%

Stylus ATN-71E

Recommended stylus

pressure 2g \pm 0.5

Changer section (KH-8833)

Wow and flutter 0.12% (WRMS)

Speed 33-1/3, 45 (rpm)

Platter 280 mm (11 in.)

Drive system Belt-drive

Motor 24 pole synchronous

Stylus ATN-71E

Recommended stylus

pressure 2g \pm 0.5

Cassette section

Wow and flutter 0.12% (WRMS)

Frequency range 30 ~ 13,000 Hz
(Normal tape)

30 ~ 14,000 Hz

(Chrome tape)

Signal-to-noise ratio Dolby ON: 60 dB

Dolby OFF: 51 dB

Cross talk 40 dB

Channel separation 35 dB (at 1 kHz)

Speaker section

System Book-shelf, bass-reflex type
3 way

Max. input power 30W

Frequency range 45 ~ 20,000 Hz

Sensitivity 90 dB/W (1m)

Woofer 25 cm (10 in.) cone type

Mid-range 10 cm (4 in.) cone type

Tweeter 6.6 cm (2-2/3 in.) cone type

Miscellaneous

Power source AC 120V 60 Hz

Power consumption 80W

Dimensions (W x H x D)

Control center 631 x 185 x 390 mm (KH-8855)
(24-3/4 x 7-1/4 x 15-3/8 in.)

631 x 235 x 390 mm (KH-8833)

(24-3/4 x 9-1/4 x 15-3/8 in.)

631 x 135 x 395 mm (KH-858)

(24-3/4 x 5-3/8 x 15-1/2 in.)

Speaker system 330 x 570 x 270 mm

(13 x 22-1/2 x 10-5/8 in.)

Weight


Control center 13.1 kg (28.8 lbs.) (KH-8855)

13.5 kg (29.7 lbs.) (KH-8833)

10.1 kg (22.2 lbs.) (KH-858)

Speaker system 9.8 kg (21.6 lbs.) each

For servicing of speaker section, please refer to the service manual of Model CL-70.

"The word 'Dolby' and  are trade marks of Dolby Laboratories."

Note:

Specifications and the design subject to possible modification without notice due to improvements.

2. PARTS LOCATION

KH-8855
KH-8833
KH-858

● The photo shows the model KH-8855.

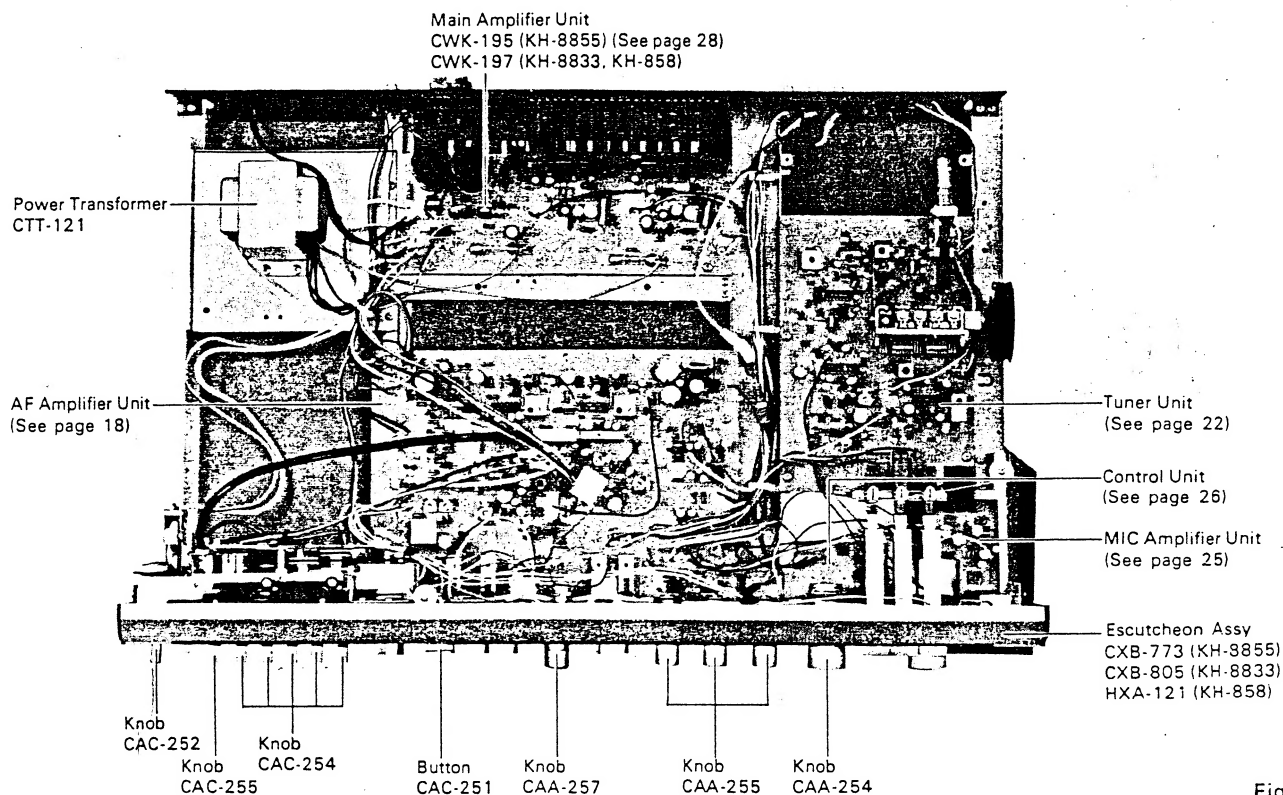


Fig. 1

3. CIRCUIT DESCRIPTION

● Block Diagram (Audio Section)

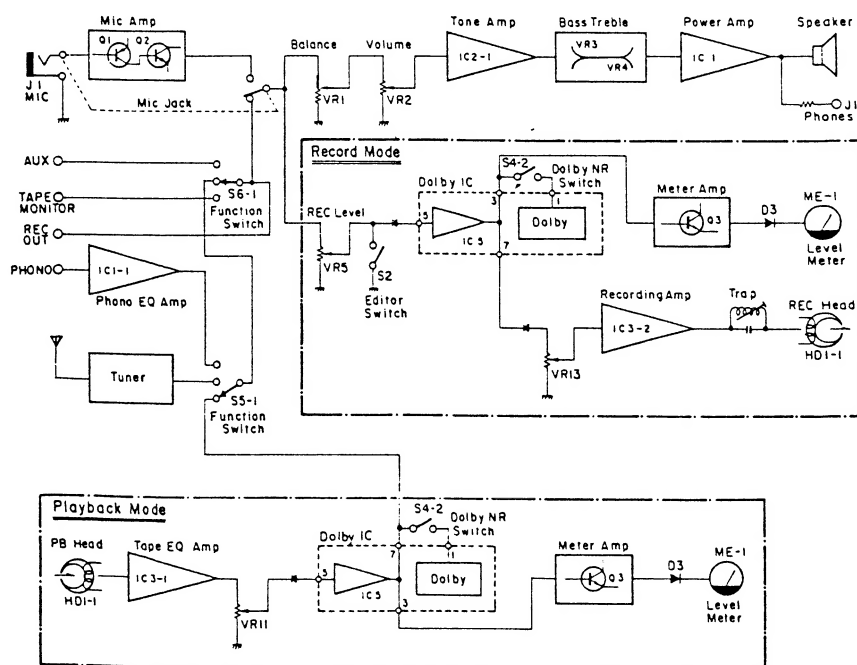


Fig. 2

● Block Diagram (Tuner Section)

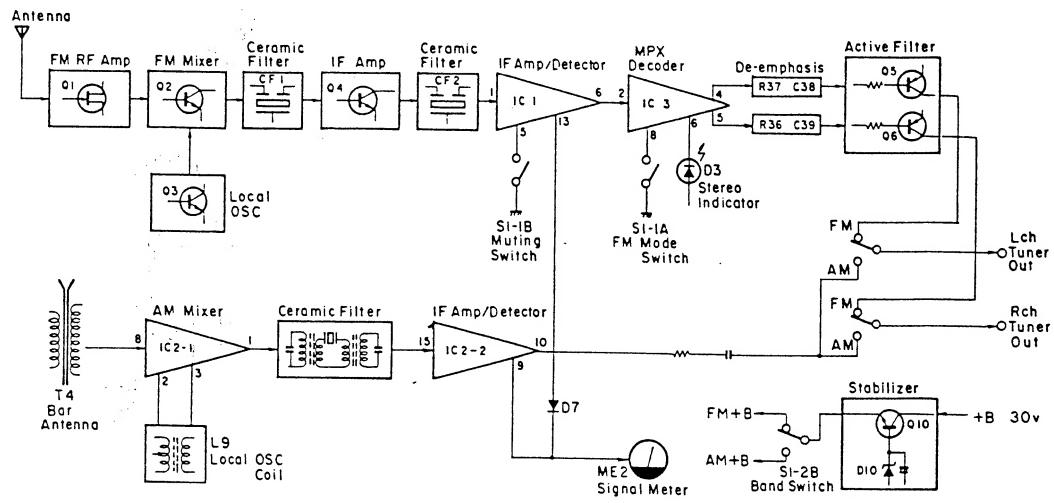


Fig. 3

● Level Diagram

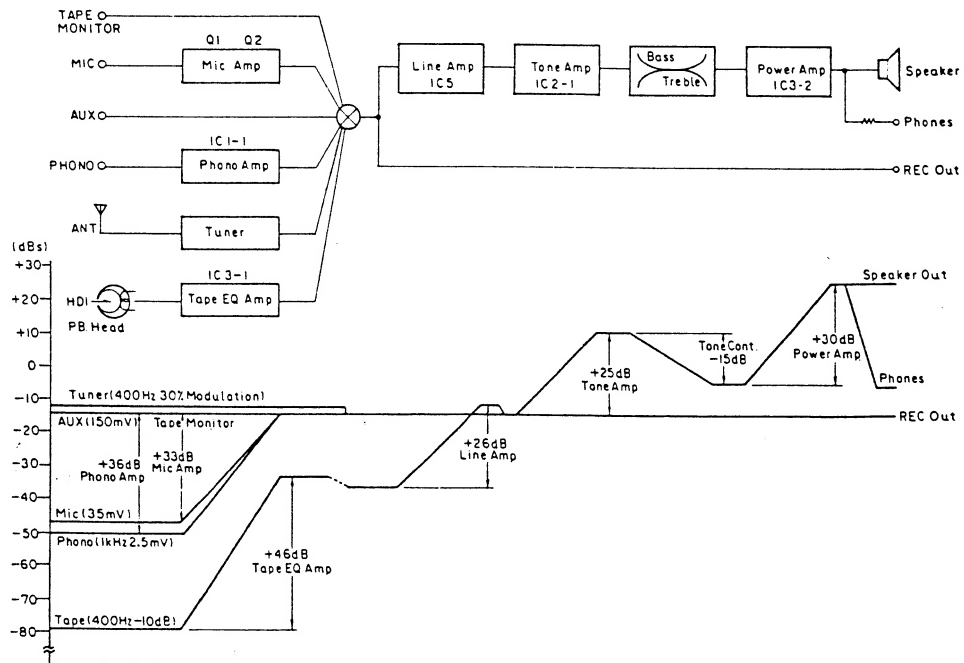


Fig. 4

4. DISASSEMBLY

● Cabinet Disassembly

1. Remove the Dust Cover (KH-8855, KH-8833).
2. Remove Player Assembly together with power lead wire of the player and input cord (KH-8855, KH-8833).
3. Remove the Cabinet as shown in Fig. 5. The model of the figure is KH-8855.

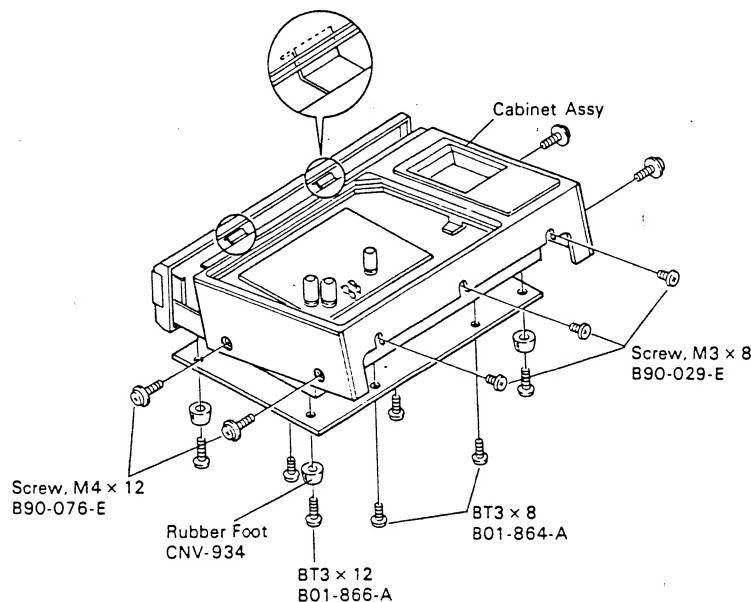


Fig. 5

● Power IC Assembly

When installing IC (SI1125H) of Main Amplifier, use YG-6240 silicone grease. Other grease may deteriorate IC plastic material chemically and make the material weak. Adjust the screw tightening torque to 5 ± 2 kg·cm. (Tighten the screw to make a slight clearance between clamp and IC. Be careful, too much tightening may cause a damage to IC.)

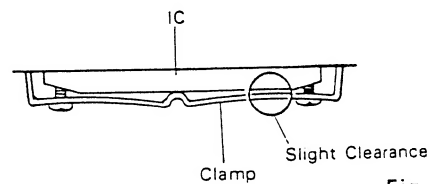


Fig. 6

5. ADJUSTMENT

5.1 HINGE ADJUSTMENT

Turning the screw of Hinge on Dust Cover to right or left will adjust the degrees of locking angle of Dust Cover. And this will also adjust the rised Dust Cover which could not be locked when depressed.

Turn to the right to adjust the rised cover.

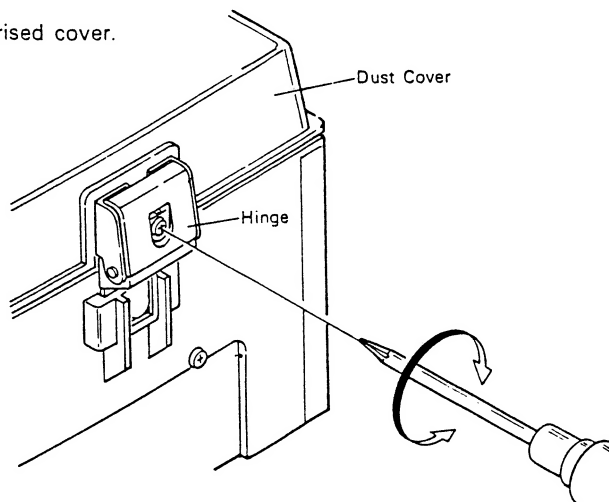


Fig. 7

5.2 DOLBY PLAYBACK ADJUSTMENT

● Connection Diagram

Switch positions

Tape selector switch NORMAL
Dolby NR switch OUT

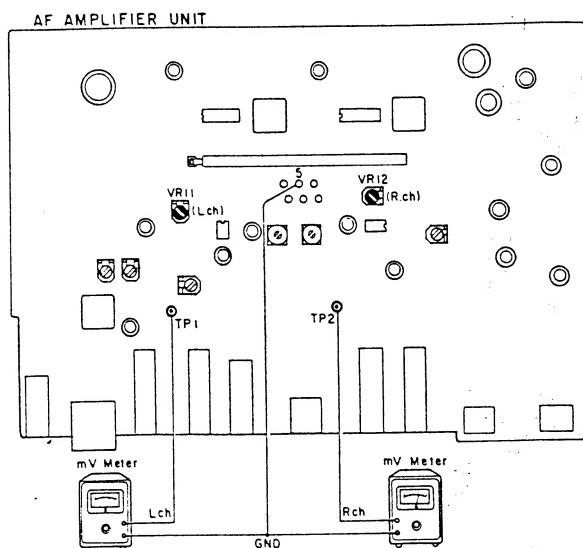


Fig. 8

● To Adjust

1. Play the Dolby level calibration tape (400 Hz, 200 nwb/m).
2. Adjust VR11 and VR12 until the mV meters read 580 mV.

5.3 TRAP ADJUSTMENT

● Connection Diagram

Switch positions

Tape selector switch NORMAL
Dolby NR switch OUT

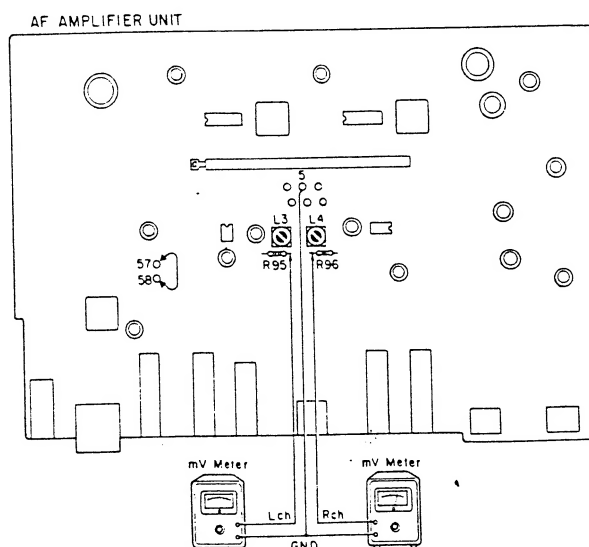


Fig. 9

● To Adjust

1. Check terminals 57 and 58 that they are shorted.
2. Insert a non-recorded tape into place, and depress the Pause Lever for recording.
3. Turn the Record Level Control knob counterclockwise all the way.
4. Adjust L3 and L4 until the mV meters read minimum.

5.4 BIAS ADJUSTMENT

● Connection Diagram

Switch positions

Tape selector switch NORMAL

Dolby NR switch OUT

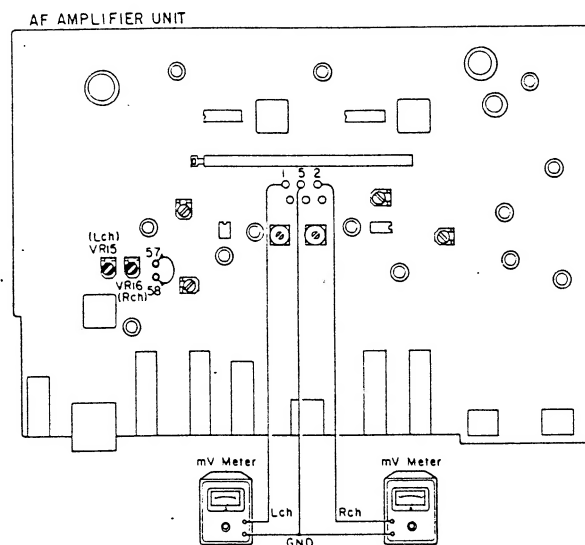


Fig. 10

● To Adjust

1. Check terminals 57 and 58 that they are shorted.
2. Insert a non-recorded tape into place, and depress the Pause Lever for recording.
3. Turn the Record Level Control knob counterclockwise all the way.
4. Adjust VR15 and VR16 until the mV meters read $450 \mu\text{A}$ (4.5 mV).

5.5 REC/PB FREQUENCY CHARACTERISTICS CHECK AND ADJUSTMENT

● Connection Diagram

Switch positions

Tape selector switch NORMAL

Dolby NR switch OUT

Function switch AUX

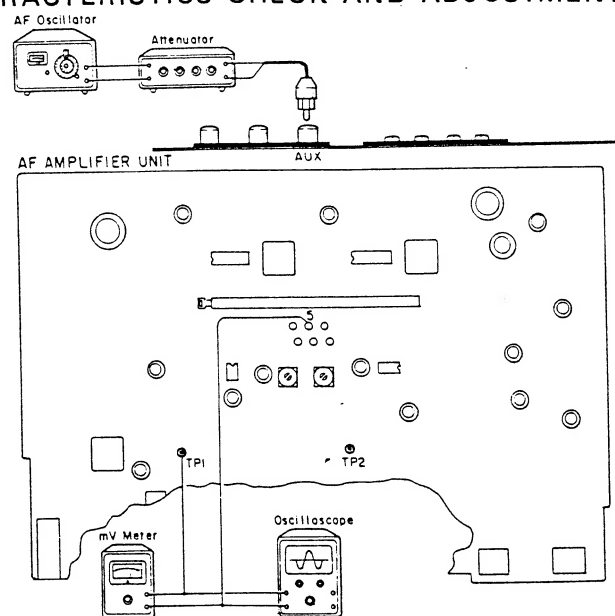


Fig. 11

● To Adjust

1. Apply a 1 kHz signal from the AF oscillator.
2. Insert a non-recorded tape into place, and depress the Pause Lever for recording.
3. Turn the Record Level Control knob until the Level Meter reads 0 dB.
4. Set the input signal at -20 dB with the attenuator.
5. Depress the Pause Lever again, and record for a few seconds.
6. Change the signal output of the AF oscillator to 10 kHz, and record for a few seconds.
7. Stop recording, and play the tape back.
8. Read the mV meter when the 1 kHz signal is reproduced.
9. Read the mV meter when the 10 kHz signal is reproduced. Read the mV meter for the level difference between the 1 kHz and 10 kHz readings.
10. If the 10 kHz reading is higher than the 1 kHz reading, increase the bias current mentioned in Paragraph 5.4; or if it is lower than the other, decrease the bias current. Increase or decrease 0.3 mV for a difference of 1 dB. Repeat the bias current adjustment until the readings of the 10 kHz and 1 kHz recording levels are the same.

5.6 RECORDING CURRENT ADJUSTMENT

● Connection Diagram

Switch positions

Tape selector switch NORMAL
Dolby NR switch OUT
Function switch AUX

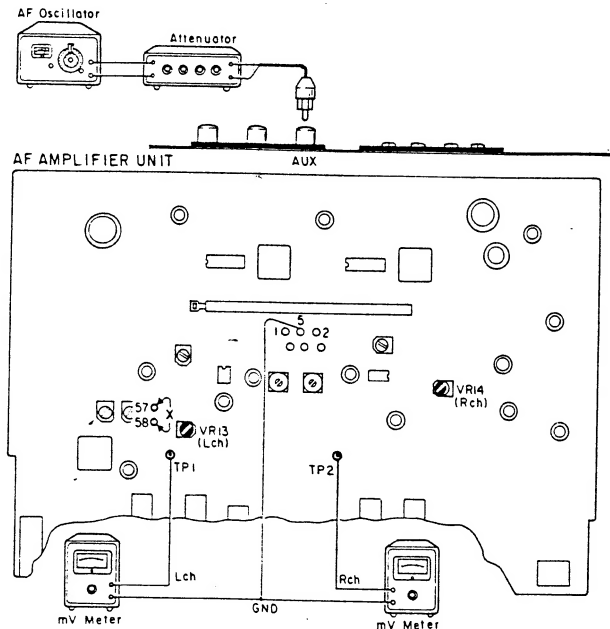


Fig. 12

● To Adjust

1. Open terminals 57 and 58.
2. Apply a 400 Hz signal from the AF oscillator.
3. Insert a non-recorded tape into place, and depress the Pause Lever for recording.
4. Turn the Record Level Control knob until the output levels at TP1 and TP2 are -2.5 dB (580 mV).
5. Reconnect the mV meters to terminals 1 and 5, and to terminals 2 and 5, and adjust VR13 and VR14 until the mV meters read -63.8 dB (0.5 mV).

5.7 REC/PB LEVEL CHECK AND ADJUSTMENT

● Connection Diagram

See Fig. 10.

● To Adjust

1. Short terminals 57 and 58.
2. Apply a 400 Hz signal from the AF oscillator.
3. Insert a non-recorded tape into place, and depress the Pause Lever for recording.
4. Depress the Pause Lever again, and record for a few seconds.
5. Stop recording, and play the tape back.
6. Check TP1 and TP2 that their outputs are -2.5 dB ± 1 dB.
7. If the outputs differ from the specified level by more than 1 dB, readjust the recording current mentioned in Paragraph 5.6. If the outputs are higher than the specified level, decrease the recording current; and if the outputs are lower, increase the recording current.

5.8 FM TRACKING ADJUSTMENT

● Connection Diagram

Switch positions

Function switch TUN
 Band switch FM
 Mode switch MONO

Preparations

1. Check the pointer that it is at the starting point (19th graduation from the left).
2. Turn the TC3 trimmer to the center position.
3. Turn TC1 and TC2 trimmers clockwise all the way, and then turn them back by about a quarter of a turn.

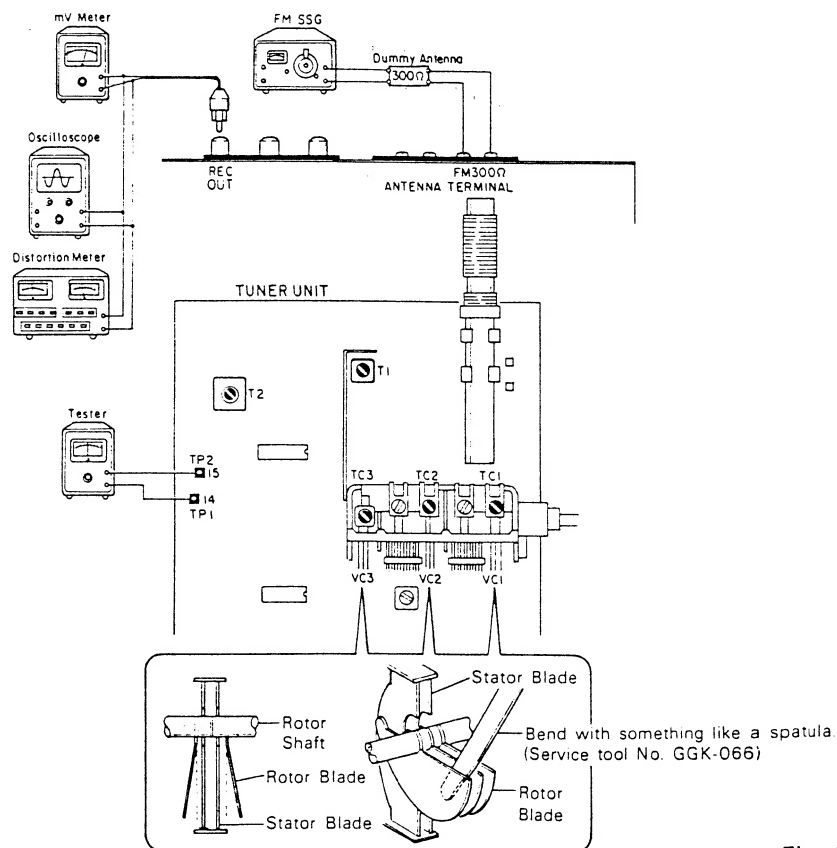


Fig. 13

● To Adjust

1. Turn the tuning knob to receive noise at about 106 MHz.
2. Adjust the core below T2 until the tester pointer is at the center (noise center).
3. Set SSG at 400 Hz, 75 kHz deviations (100% modulation).
4. Apply a 106 MHz signal of 60 to 80 dB from SSG, and tune in the set to 106 MHz. Adjust the TC3 until the tester pointer is at the center.
5. Under the condition mentioned in Step 4, apply a signal of 30 to 40 dB, and adjust TC1 and TC2 until the signal meter (meter in the set casing) reads maximum.
6. Apply a 90 MHz signal of 60 to 80 dB from SSG, and tune in the set to 90 MHz. Adjust the VC3 rotor until the tester pointer is at the center.

Insert something like a spatula into the rotor blades, and bends them to the same proportions, making sure not to bend them inward of the dotted lines. (For easy adjustment, spread the blades wide first, and then bend them back inward.)

7. Under the condition mentioned in Step 6, apply a signal of 30 to 40 dB, and adjust VC1 and VC2 rotors until the signal meter reads maximum.
8. Repeat Steps 4 through 7 a few times until frequencies of 90 to 106 MHz can be received.
9. Under the condition mentioned in Step 7, adjust T1 until the signal meter reads maximum.
10. Apply a 98 MHz signal of 60 dB from SSG, and tune in the set to 98 MHz. Adjust the core above T2 to reduce distortion to a minimum.

5.9 FM MPX ADJUSTMENT

● Connection Diagram

Switch positions

Function switch TUN
Band switch FM
Mode switch AUTO

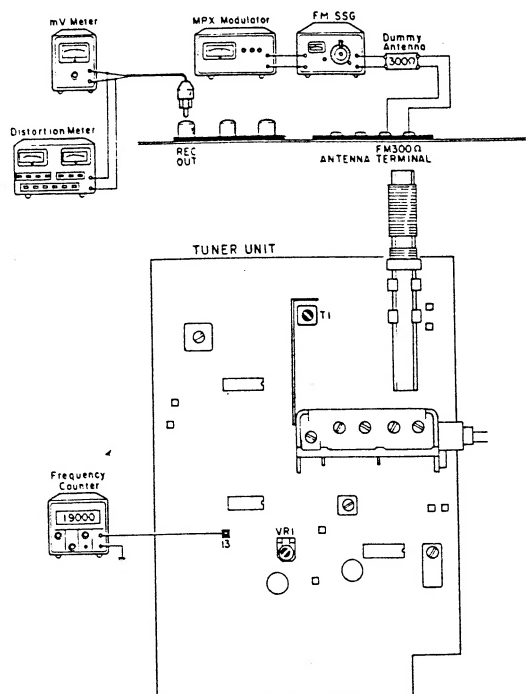


Fig. 14

● To Adjust

1. Set SSG and the main signal of MPX Modulator at 1 kHz, 67.5 kHz deviation. Also set the pilot signal at 19 kHz, 7.5 kHz deviation.
2. Add the signal of 98 MHz, 60 dB from SSG to the unit and tune in to 98 MHz on the dial scale.
3. Connect the frequency counter to the test point (No. 13). Cut SSG modulation, and adjust VR1 so that the frequency counter will be 19 kHz \pm 20 Hz.
4. Pass the signal from MPX Modulator only through either L Channel or R Channel, and adjust T1 so that the distortion factor will be minimum.

5.10 AM ADJUSTMENT

● Connection Diagram

Switch positions

Function switch TUN
Band switch AM

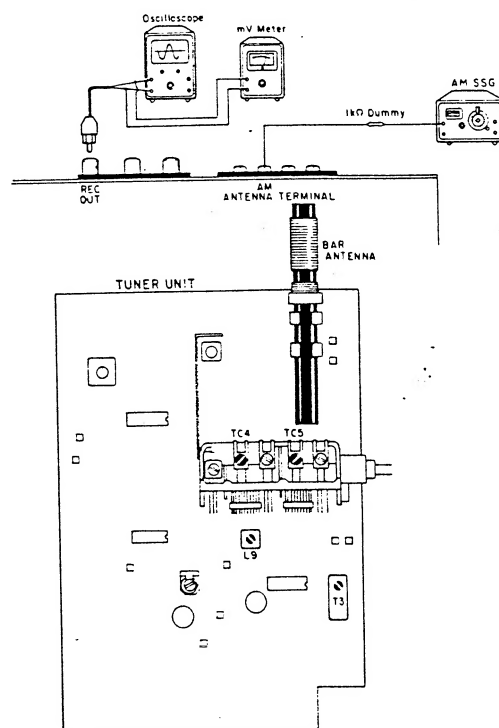


Fig. 15

ADJUSTMENT

● To Adjust

1. Set SSG at 400 Hz, 30% modulation.
2. Add the output signal of 600 kHz, 60 dB from SSG to the unit, and tune in to 600 kHz on the dial scale.
3. Adjust L9 so that the output will be maximum.
4. Add the output signal of 1,400 kHz from SSG to the unit, and tune in to 1,400 kHz on the dial scale.
5. Adjust TC4 so that the output will be maximum.
6. Repeat (2) ~ (5) above several times, and adjust the output to be maximum at 600 kHz, 1,400 kHz.

7. Set SSG to an output of 30 dB, and adjust the Bar Antenna coil (600 kHz) and TC5 (1,400 kHz) repeatedly so that its output level is highest at 600 kHz and 1,400 kHz.
8. Add the output signal of 1,000 kHz from SSG to the unit, and tune in to 1,000 kHz on the dial scale.
9. Adjust T3 for the output to be maximum.

6. DIAL STRINGING

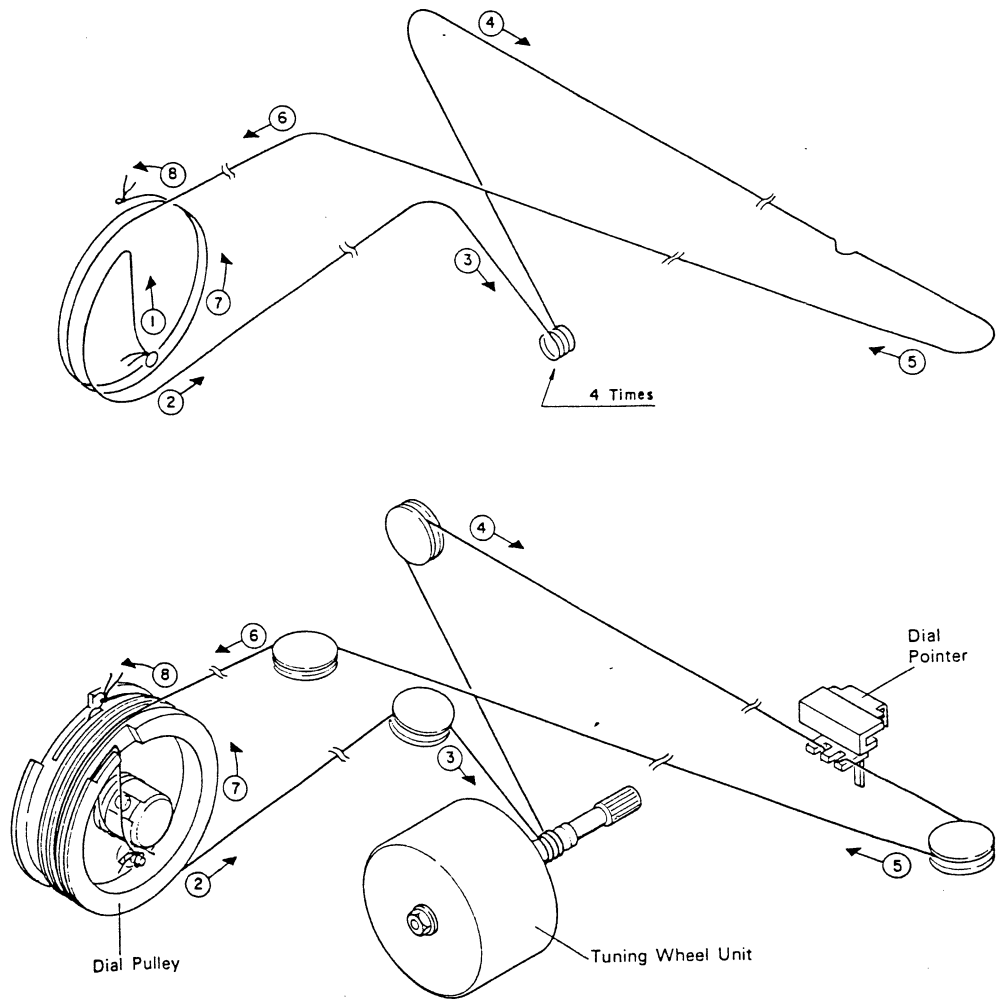


Fig. 16

● IC's and Transistors

2SC733



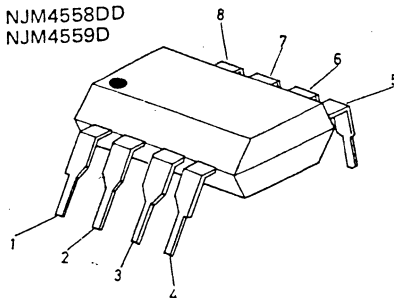
2SA641
2SC828
2SC945
2SC1740LN
2SA826LN



2SA683
2SD468



NJM4558DD
NJM4559D



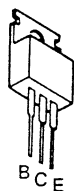
2SC461
2SC535



2SK49



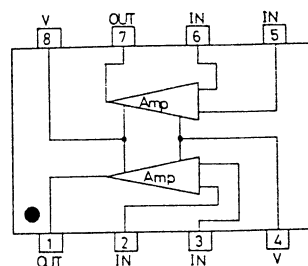
2SC1061



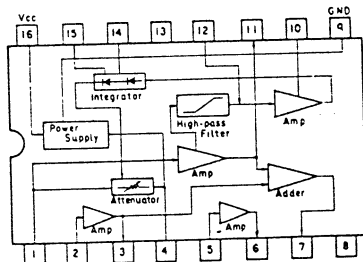
2SC495
2SC1449
2SC1568



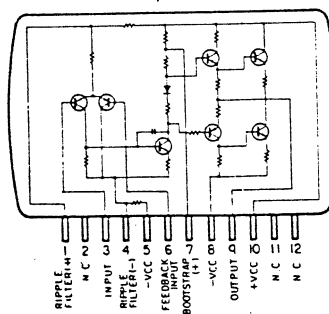
NJM4558DD
NJM4559D



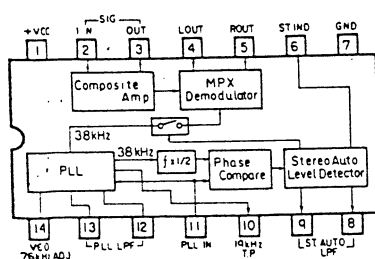
NE646BN



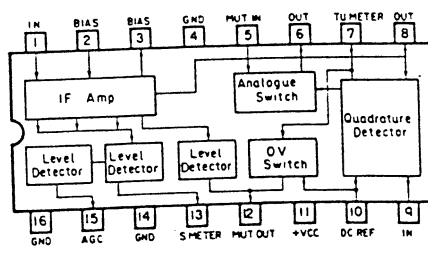
S1, 1125H



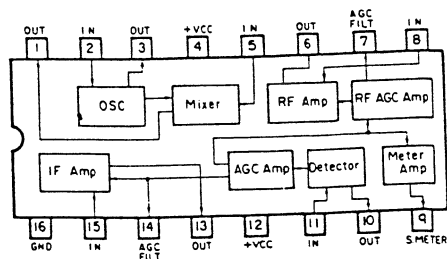
HA1156WP



HA1137



HA1138



7. SCHEMATIC CIRCUIT DIAGRAM

● KH-8855

KH-8855
KH-8833
KH-858

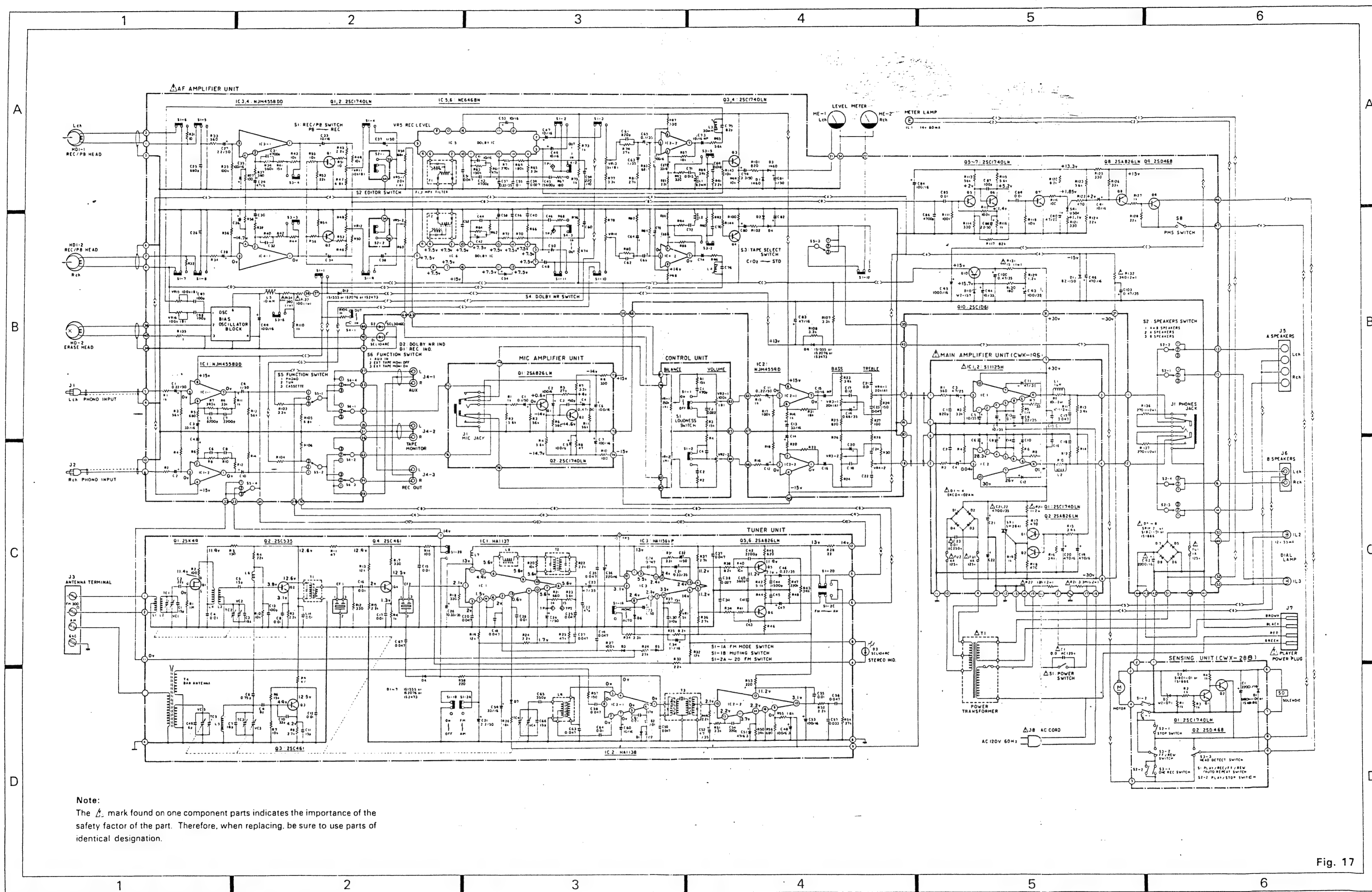


Fig. 17

SCHEMATIC CIRCUIT DIAGRAM

● KH-8833

KH-8855

KH-8833

KH-858

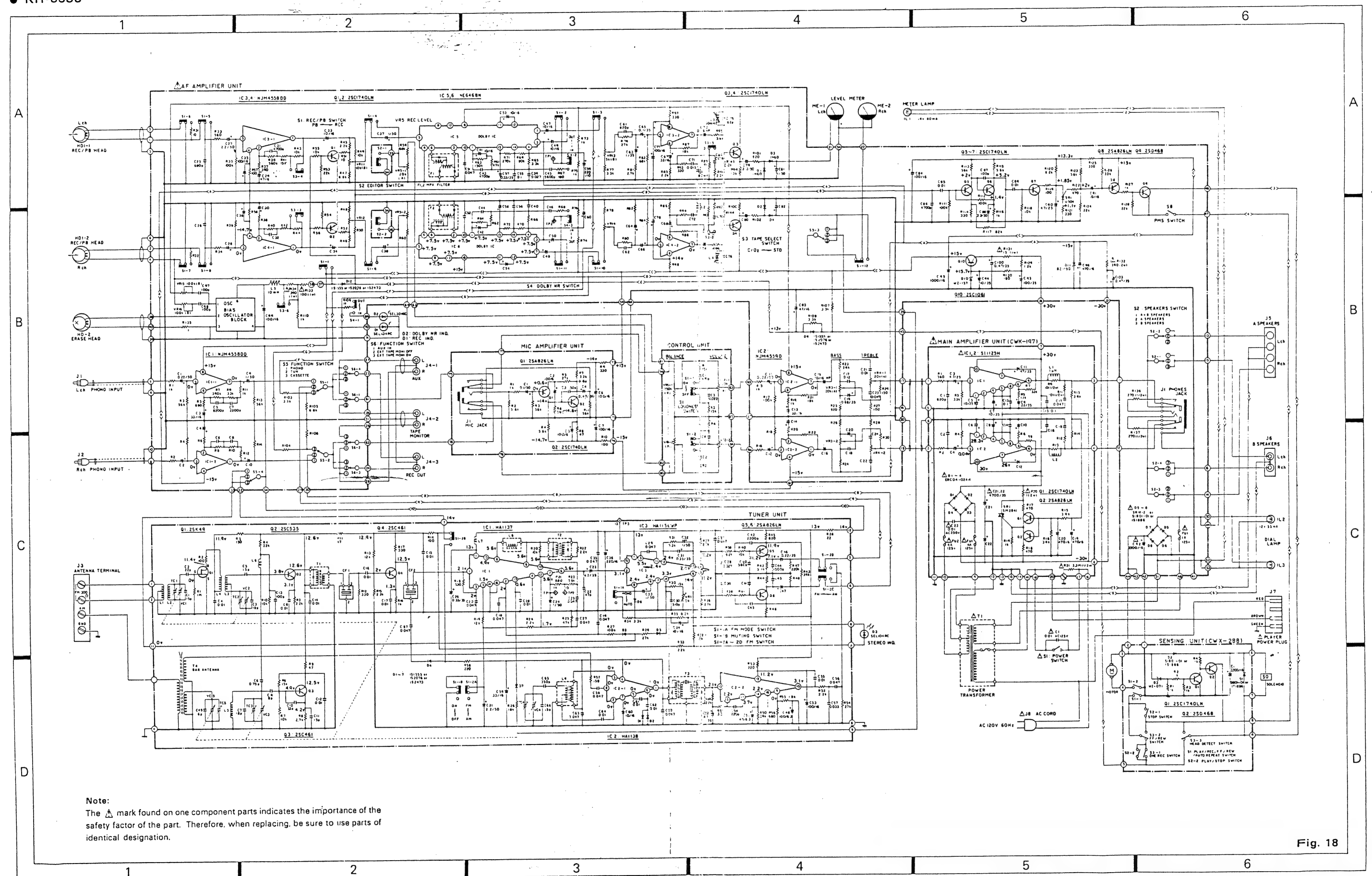


Fig. 18

SCHEMATIC CIRCUIT DIAGRAM

● KH-858

KH-881
KH-882
KH-858

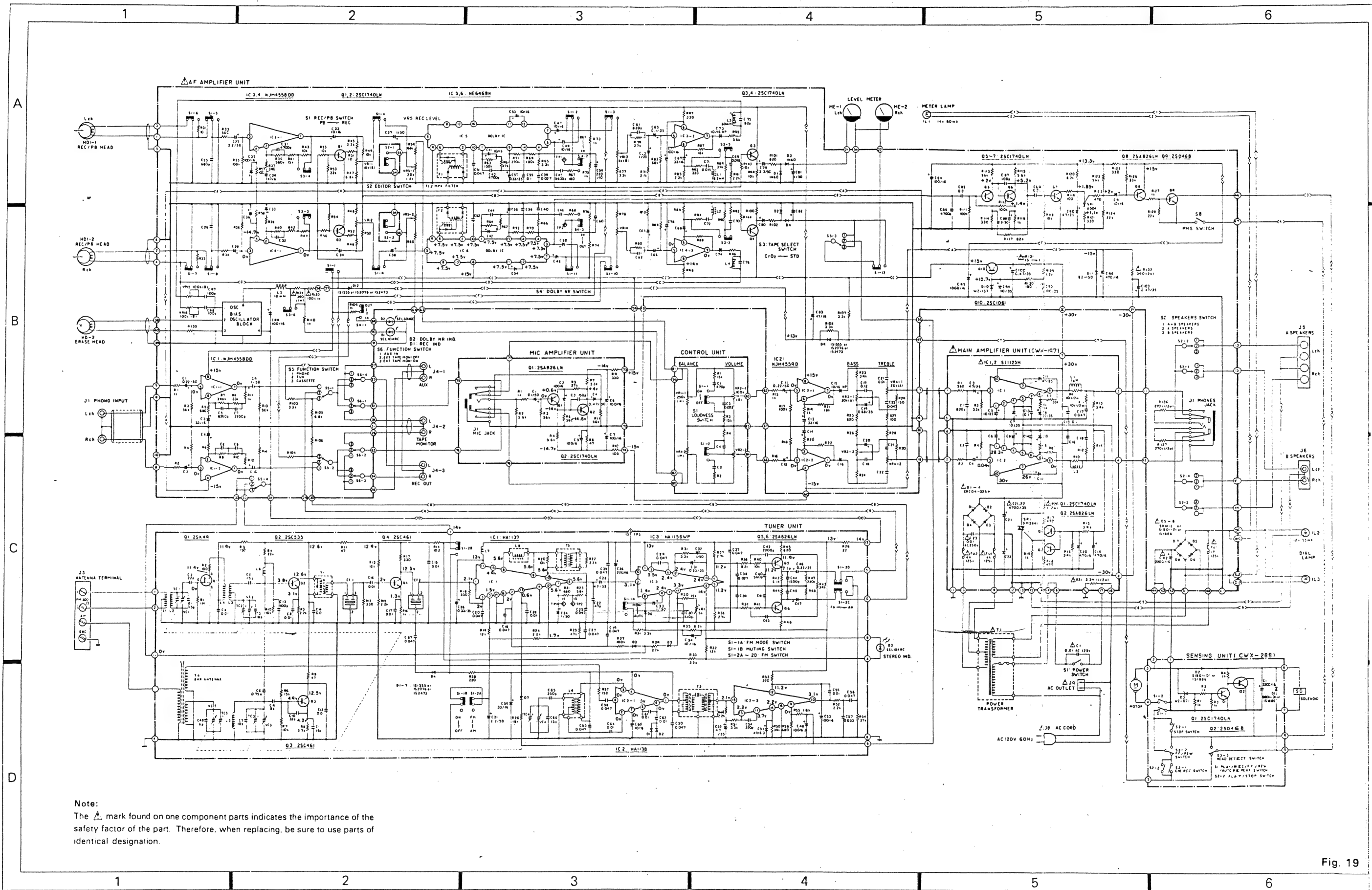


Fig. 19

KH-8855
|| KH-8833
KH-858

AF AMPLIFIER UNIT



● Parts List

NOTE:
When ordering resistors, first covert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).
560Ω 56×10¹ 561..... RD1/4PS 561 J
47kΩ 47×10³ 473..... RD1/4PS 473 J
0.5Ω 0R5 RN2H 0R5 K
1Ω 010..... RS1P 010 K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).
5.62kΩ 562×10¹ RN1/4SR 562 F

MISCELLANEOUS

Part No.	Symbol & Description
NJM4558DD	IC1, IC3, IC4
NJM4559D	IC2
NE646BN	IC5, IC6
2SC1740LN	Q1—Q7
2SA826LN	Q8
2SD468	Q9
2SC1061	Q10
1N60	D1—D4
SR1K-2 or SIB01-01 or	D5—D8
1S1886	
1S1555 or 1S2076 or 1S2473	D9, D12
WZ-157	D10
BZ-150	D11
U504	SR1
CTF-061	L1, L2 Ferri-Inductor, 8.2 mH
CTH-014	L3, L4 Coil, 30 mH
CTF-029	L5 Ferri-Inductor, 10 mH
CWX-305	F1, F2 Filter Unit
CWX-306	OSC Oscillator Unit
CCS-185	VR3, VR4 Volume, 20 kΩ (A)
CCS-186	VR5 Volume, 20 kΩ (A)
CCP-056	VR11,VR12 Semi-fixed, 10 kΩ (B)
CCP-057	VR13,VR14 Semi-fixed, 5 kΩ (B)
CCP-058	VR15,VR16 Semi-fixed, 100 kΩ (B)
CSH-059	S1 Switch
CSK-023	S2, S5, S6 Switch
CSK-024	S3 Switch
CSK-025	S4 Switch
CSK-027	S8 Switch
CEK-042	FU1 Fuse, 125V 1A
CKN-070	J1 Jack

RESISTORS

Part No.	Symbol & Description
RD1/4PS□□□J	R1—R130, R135, R143, R144
RS1P□□□K	R131, R133
RS2P□□□K	R132
RS1P□□□J	R134
RD1/2PS□□□J	R136, R137

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

CAPACITORS

Part No.	Symbol & Description
CEAR22P50NL	C1, C2, C11, C12
CEA330P16	C3, C4, C13, C14, C67, C68
CQMA822J50	C5, C6
CQMA222J50	C7, C8
CEA1R0P50	C9, C10, C81, C82
CEA100M16NP	C15, C16, C73, C74
CQMA124K50	C17, C18
CSZAR68M35	C19, C20
CQMA103K50	C21, C22, C85, C89
CQMA473K50	C23, C24
CKDYB681K50	C25, C26
CEA2R2P50NL	C27, C28
CEA470P6	C29, C30
CQMA472J50	C31, C32, C43, C44
CEA100P16	C33, C34, C41, C42, C47—C50, C53, C54, C91
CEA101P16	C35, C36, C77, C78, C84, C99
CEA1R0P50NL	C37, C38
CQMA273J50	C39, C40
CQMA562J50	C45, C46
CQMA473J50	C51, C52
CQMA104K50	C55, C56
CSZAR33M35	C57, C58
CEA221P10	C59, C60
CKDYB821K50	C61, C62
CSZA1R0M35	C63, C64
CSZA0R1M35	C65, C66
CQMA183J50	C69, C70
CQMA153J50	C71, C72
CCDSL820K50	C75, C76
CEA3R3P50	C79, C80
CEA470P16	C83
CQMA472K50	C86
CKDYB101K50	C87, C97, C98
CEA2R2P50	C88
CEA4R7P25NL	C90
CEA222P16	C92
CEA101P35	C93
CEA100P35	C94
CEA102P16	C95
CEA471P16	C96
CSZAR47M35	C100, C103

List of changed parts information will be furnished whenever necessary and you are requested to amend parts number in this parts list.

List of Changed Parts for Factory Modification

Symbol	Part No.	Description

9. TUNER UNIT

● Parts Connection

KH-8855
KH-8833
KH-858

TUNER UNIT

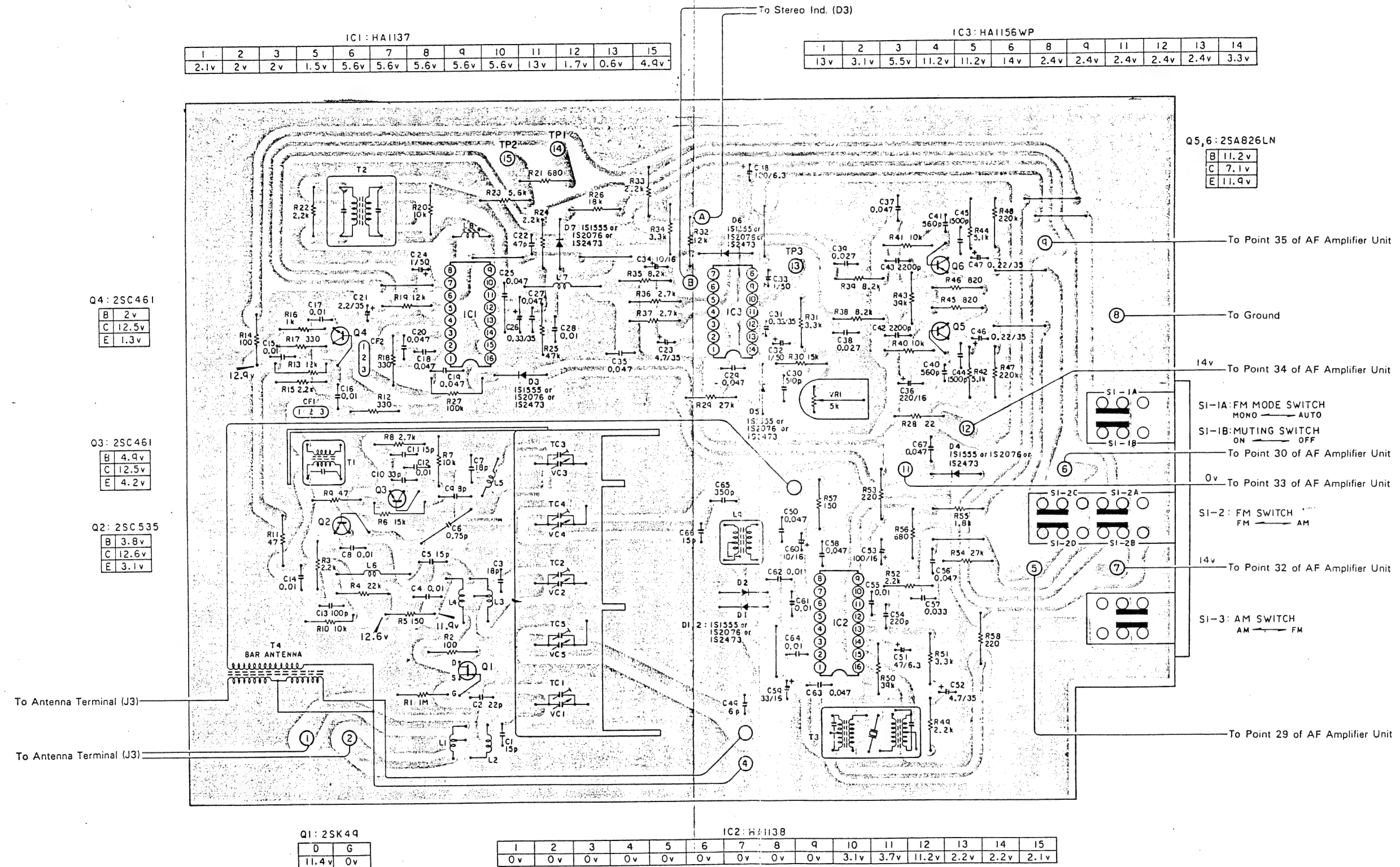


Fig. 21

● Parts List

MISCELLANEOUS

Part No.	Symbol & Description	
HA1137	IC1	
HA1138	IC2	
HA1156WP	IC3	
2SK49-H2	Q1	
2SC535-C	Q2	
2SC461-C	Q3, Q4	
2SA826LN	Q5, Q6	
1S1555 or	D1—D7	
1S2076 or		
1S2473		
CTH-037	L6, L7	Coil
CTF-071	L8	Micro Inductor
CTB-063	L9	Coil
CTF-038	CF1, CF2	Ceramic Filter
CCP-057	VR1	Semi-fixed, 5 k Ω (B)
CCK-011	TC1—TC4, VC1—VC4	Variable Condenser
CTC-073	T1	IF Transformer
CTC-074	T2	Coil
CTE-085	T3	IF Transformer
HXA-101	T4	Antenna Unit
CSG-112	S1	Switch
	L1—L5	Coil

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

RESISTORS

Part No.	Symbol & Description
RD1/8PS□□□J	R1—R58

CAPACITORS

Part No.	Symbol & Description
CCDUJ150K50	C1
CCDSL220K50	C2
CCDUJ180K50	C3
CKDYF103Z25	C4, C8, C12, C14—C17, C28 C55, C61, C62
CCDCH150K50	C5, C11
CGBR75K500	C6
CCDRH180K50	C7
CCDLH080F50	C9
CCDCH330K50	C10
CCDSL101K50	C13
CKDYF473Z25	C18—C20, C25, C27, C35, C37, C50, C58, C63, C67
CEA2R2P50	C21
CCDSL470K50	C22
CEA4R7P35	C23, C52
CEA010P50	C24, C32, C33
CSZAR33M35	C26, C31
CKDBC473K25	C29, C56
CQSH511J50	C30
CEA100P16	C34, C60
CEA221P16	C36
CQMA273K50	C38, C39
CKDYB561K50	C40, C41
CKDYB222K50	C42, C43
CKDYB152K50	C44, C45
CSZAR22M35	C46, C47
CEA101P6R3	C48
CCDUJ060F50	C49
CEA470P6R3	C51
CEA101P16	C53
CCDSL221K50	C54
CKDBC333K25	C57
CEA330P16	C59
CQMA103K50	C64
CQSH351J50	C65
CCDRH150K50	C66

●

Parts List

MISCELLANEOUS

Part No.	Symbol & Description	
HA1137	IC1	
HA1138	IC2	
HA1156WP	IC3	
2SK49-H2	Q1	
2SC535-C	Q2	
2SC461-C	Q3, Q4	
2SA826LN	Q5, Q6	
1S1555 or	D1 — D7	
1S2076 or		
1S2473		
CTH-037	L6, L7	Coil
CTF-071	L8	Micro Inductor
CTB-063	L9	Coil
CTF-038	CF1, CF2	Ceramic Filter
CCP-057	VR1	Semi-fixed, 5 k Ω (B)
CCK-011	TC1 — TC4, VC1 — VC4	Variable Condenser
CTC-073	T1	IF Transformer
CTC-074	T2	Coil
CTE-085	T3	IF Transformer
HXA-101	T4	Antenna Unit
CSG-112	S1	Switch
	L1 — L5	Coil

Note:

When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

RESISTORS

Part No.	Symbol & Description
RD1/8PS0000J	R1 — R58

CAPACITORS

Part No.	Symbol & Description
CCDUJ150K50	C1
CCDSL220K50	C2
CCDUJ180K50	C3
CKDYF103Z25	C4, C8, C12, C14 — C17, C28 C55, C61, C62
CCDCH150K50	C5, C11
CGBR75K500	C6
CCDRH180K50	C7
CCDLH080F50	C9
CCDCH330K50	C10
CCDSL101K50	C13
CKDYF473Z25	C18 — C20, C25, C27, C35, C37, C50, C58, C63, C67
CEA2R2P50	C21
CCDSL470K50	C22
CEA4R7P35	C23, C52
CEA010P50	C24, C32, C33
CSZAR33M35	C26, C31
CKDBC473K25	C29, C56
CQSH511J50	C30
CEA100P16	C34, C60
CEA221P16	C36
CQMA273K50	C38, C39
CKDYB561K50	C40, C41
CKDYB222K50	C42, C43
CKDYB152K50	C44, C45
CSZAR22M35	C46, C47
CEA101P6R3	C48
CCDUJ060F50	C49
CEA470P6R3	C51
CEA101P16	C53
CCDSL221K50	C54
CKDBC333K25	C57
CEA330P16	C59
CQMA103K50	C64
CQSH351J50	C65
CCDRH150K50	C66

10. MIC AMPLIFIER UNIT

● Parts Connection

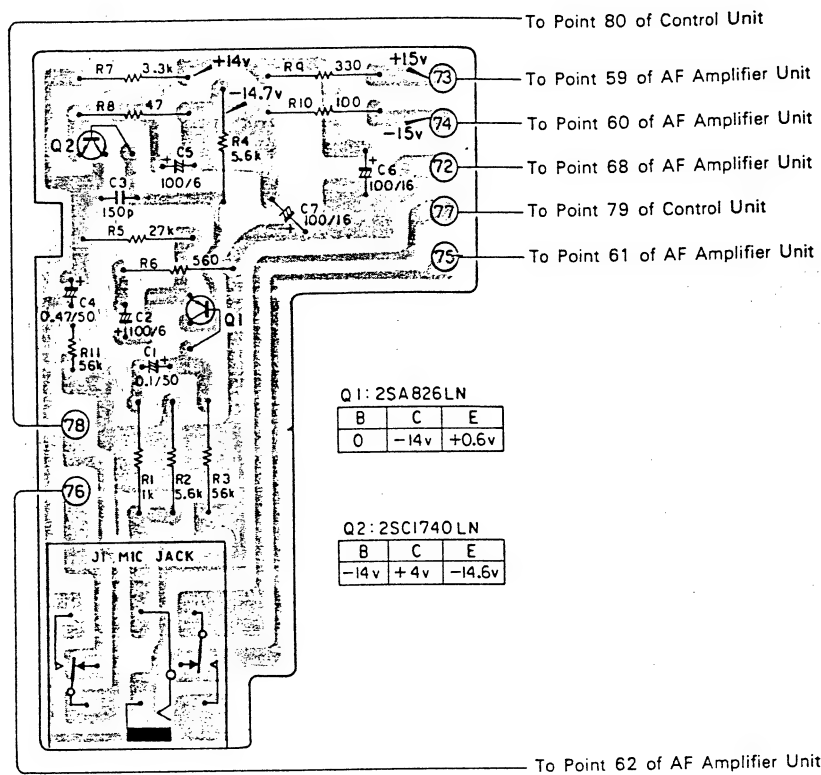


Fig. 22

● Parts List

MISCELLANEOUS

Part No.	Symbol & Description
2SA826LN-R	Q1
2SC1740LN-R	Q2
CKN-069	J1 Jack

CAPACITORS

Part No.	Symbol & Description
CEA0R1P50NL	C1
CEA101P6	C2, C5
CKDYB151K50	C3
CEAR47P50NL	C4
CEA101P16	C6, C7

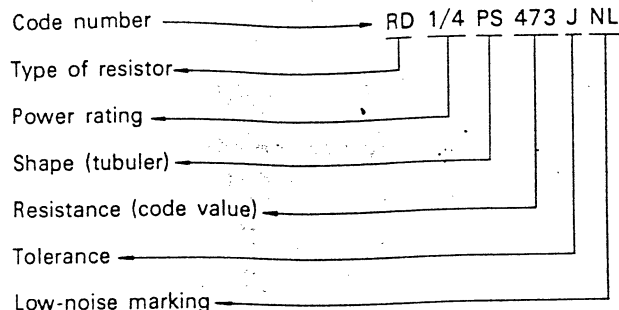
Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

RESISTORS

Part No.	Symbol & Description
RD1/4PS□□□J	R1-R10
RD1/4VS□□□J	R11

RESISTANCE VALUE CODES

Code numbers of resistors used in Pioneer equipment are expressed in the following way:



Furthermore, in the list of parts found in the Service Manual, the resistance (code value) part of the above code number is expressed as □□□ or □□□□.

Resistors included in the Service Manual list of parts

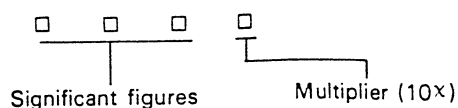
Ex. RD 1/4 PS □□□ JNL

When ordering resistor components, first ascertain the actual resistance value from the circuit diagram, and then convert it into code no. from as shown in the following examples.

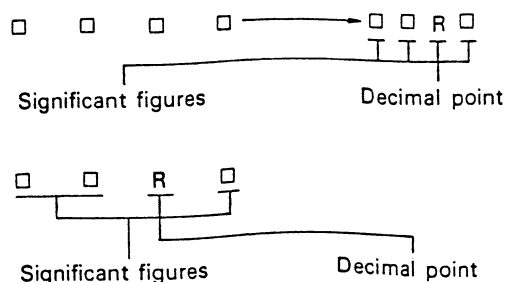
For further details on code numbers, refer to "Tuning Fork" VOL. 1.

Ex. 1 For □□□□ Codes

* General resistors



* Resistors with fractional values

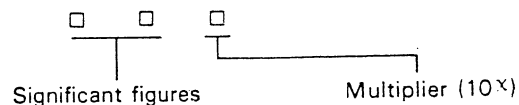


Ex. 1

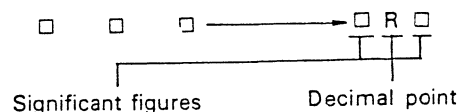
Nominal resistance (Ω)	Significant figure (three figures)	Multiplier (10 ^x)	Resistance value code
5.1	510	.....	5R10
5.62	562	.....	5R62
10	100	.....	10R0
22.5	225	.....	22R5
110	110	× 10 ⁰	1100
1k (1000)	100	× 10 ¹	1001
1.56k (1560)	156	× 10 ¹	1561
10k (10000)	100	× 10 ²	1002
33.6k (33600)	336	× 10 ²	3362
112k (112000)	112	× 10 ³	1123
1M (1000000)	100	× 10 ⁴	1004
1.56M (1560000)	156	× 10 ⁴	1564

Ex. 2 For □□□ Codes

* General resistors



* Resistors with fractional values



Ex. 2

Nominal resistance (Ω)	Significant figure (two figures)	Multiplier (10 ^x)	Resistance value code
0.5	05	.....	0R5
1.5	15	.....	1R5
1	01	× 10 ⁰	010
22	22	× 10 ⁰	220
330	33	× 10 ¹	331
1k (1000)	10	× 10 ²	102
5.6k (5600)	56	× 10 ²	562
68k (68000)	68	× 10 ³	683
820k (820000)	82	× 10 ⁴	824
1M (1000000)	10	× 10 ⁵	105
2.2M (2200000)	22	× 10 ⁵	225

11. CONTROL UNIT

● Parts Connection

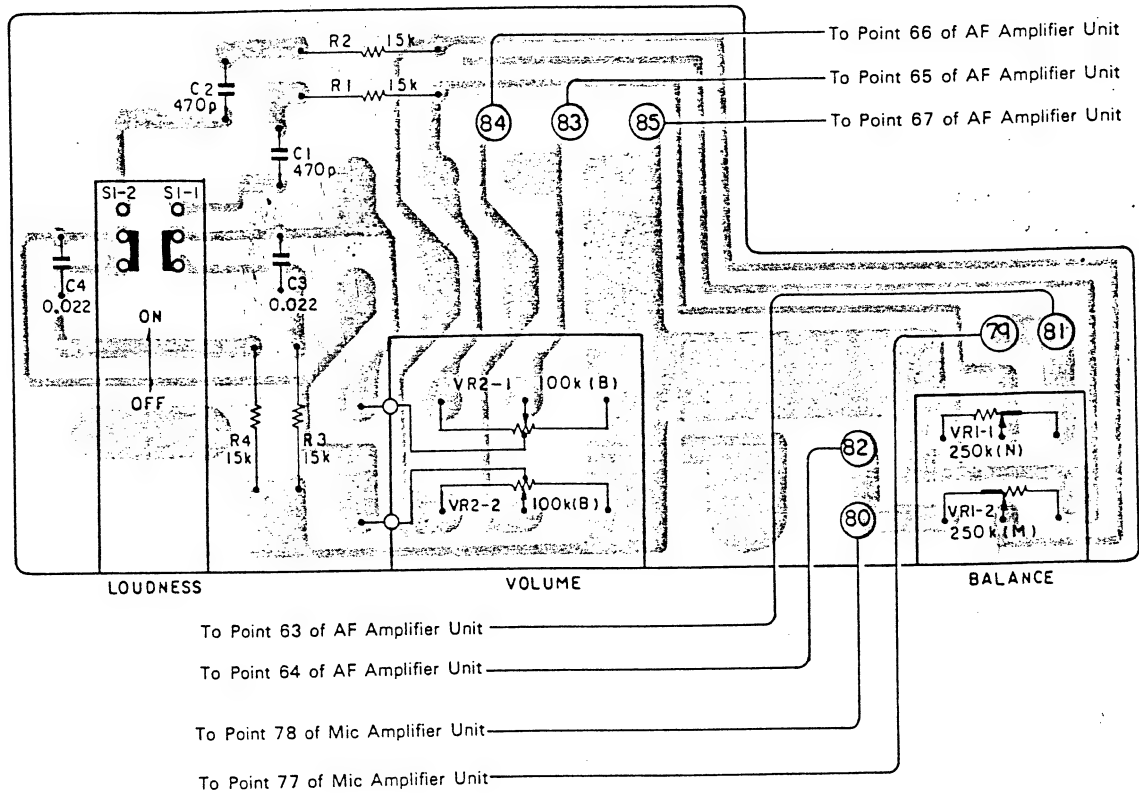


Fig. 23

● Parts List

MISCELLANEOUS

Part No.	Symbol & Description
CCS-187	VR1 Volume, 250 kΩ (MN)
CCV-009	VR2 Volume, 100 kΩ (B)
CSK-026	S1

CAPACITORS

Part No.	Symbol & Description
CKDYB471K50	C1, C2
CQMA223K50	C3, C4

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

RESISTORS

Part No.	Symbol & Description
RD1/4PS□□□J	R1—R4

12. SENSING UNIT (CWX-288)

● Parts Connection

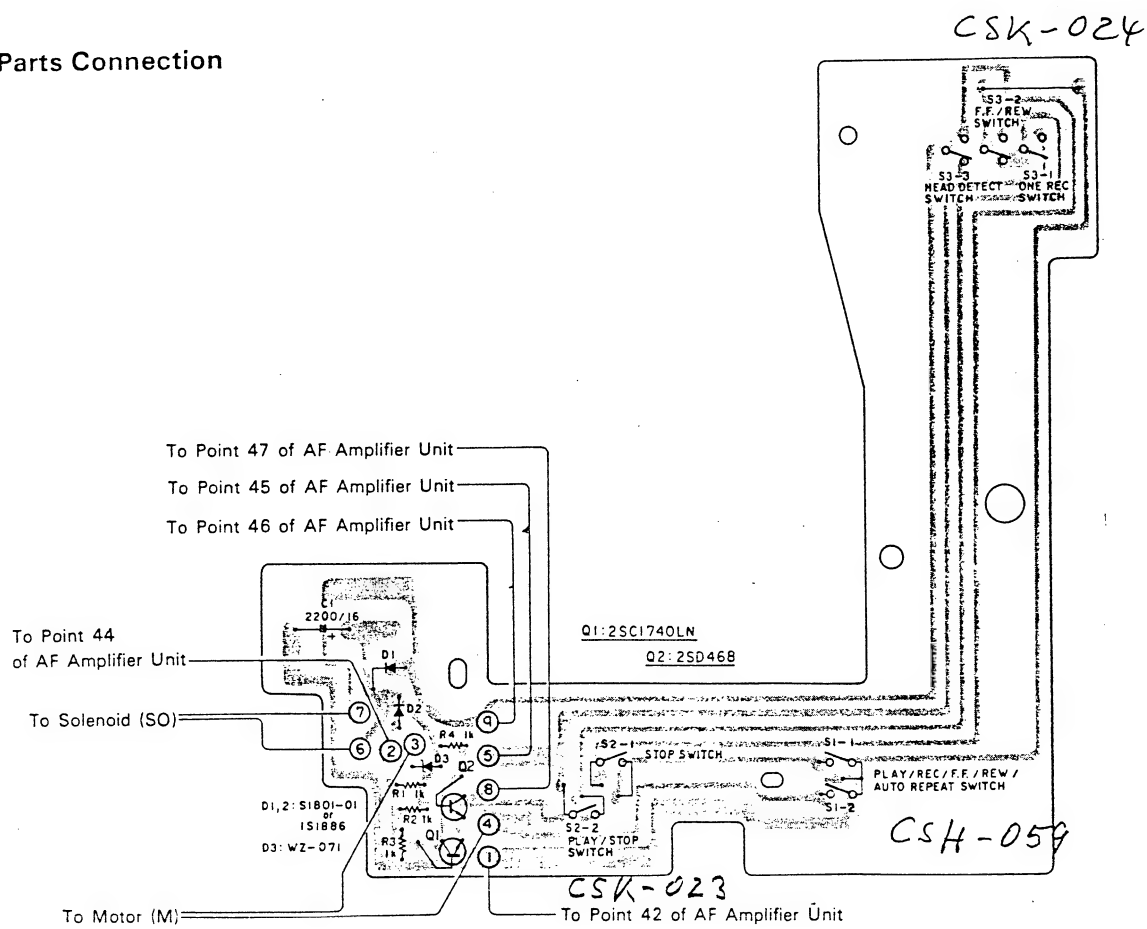


Fig. 24

● Parts List

MISCELLANEOUS

Part No.	Symbol & Description
2SC1740LN	Q1
2SD468-C	Q2
S1801-01 or 1S1886	D1, D2
WZ-071	D3

CAPACITORS

Part No.	Symbol & Description
HCH-107	C1 Electrolytic 2200/16V

RESISTORS

Part No.	Symbol & Description
RD1/4VS□□□J	R1 - R4

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

13. MAIN AMPLIFIER UNIT

KH-8855
KH-8833
KH-858

- Parts Connection KH-8855 (CWK-195)
KH-8833, KH-858 (CWK-197)

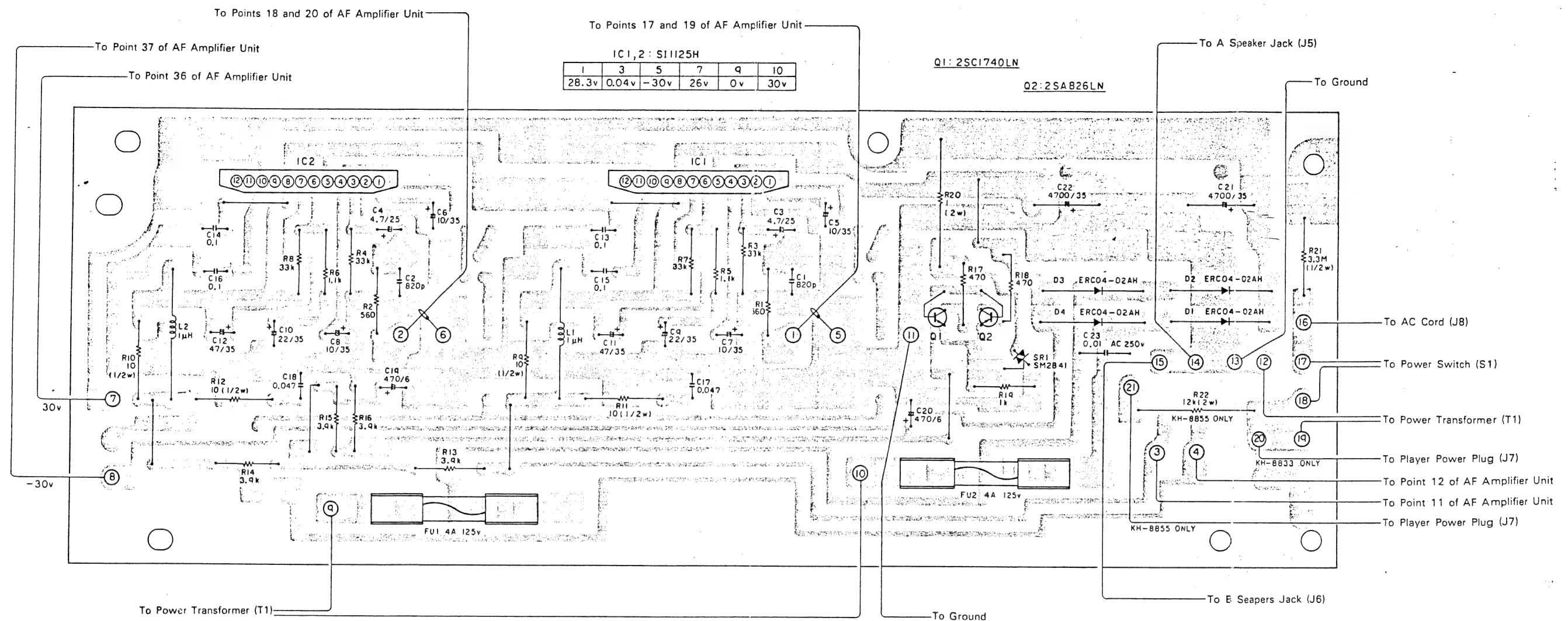


Fig. 25

Parts List

MISCELLANEOUS

Part No.	Symbol & Description
△ SI-1125H	IC1, IC2
2SC1740LN	Q1
2SA826LN	Q2
△ ERC04-02AH	D1-D4
SM2B41	SR1 Triac
△ CEK-043	FU1, FU2 Fuse, 125V 4A

RESISTORS

Part No.	Symbol & Description
RD1/4PS□□□J	R1-R8, R13-R19
RD1/2PS□□□J	R9-R12
△ RN2P□□□K	R20
△ RD1/2PS□□□J	R21
△ RS2P□□□K	R22 (KH-8855)

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

CAPACITORS

Part No.	Symbol & Description	Part No.	Symbol & Description
CKDYB821K50	C1, C2	△ CCG-003	C23 Ceramic 0.01/AC250V
CEA4R7P25NL	C3, C4		
CEA100P35	C5-C8		
CEA220P35	C9, C10		
CEA470P35	C11, C12		
CQMA104K50	C13-C16		
CQMA473K50	C17, C18		
CEA471P6	C19, C20		
△ HCH-103 or CCH-033	C21, C22 Electrolytic 4700/35V		

14. PLAYER UNIT (KH-8855)

KH-8855
KH-8833
KH-858

● Circuit Diagram

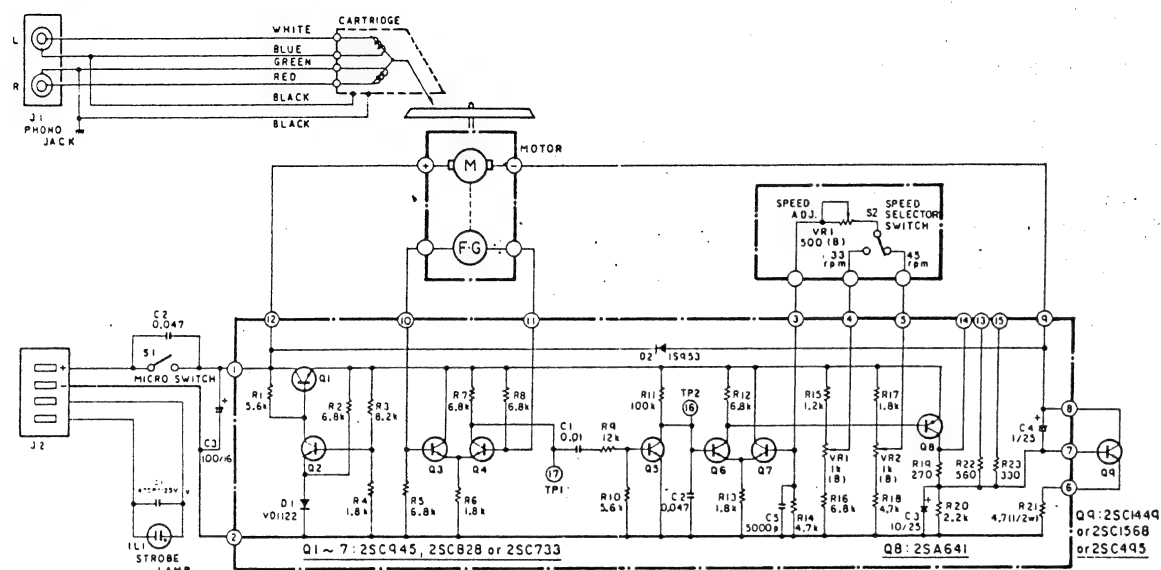


Fig. 26

● Parts Connection

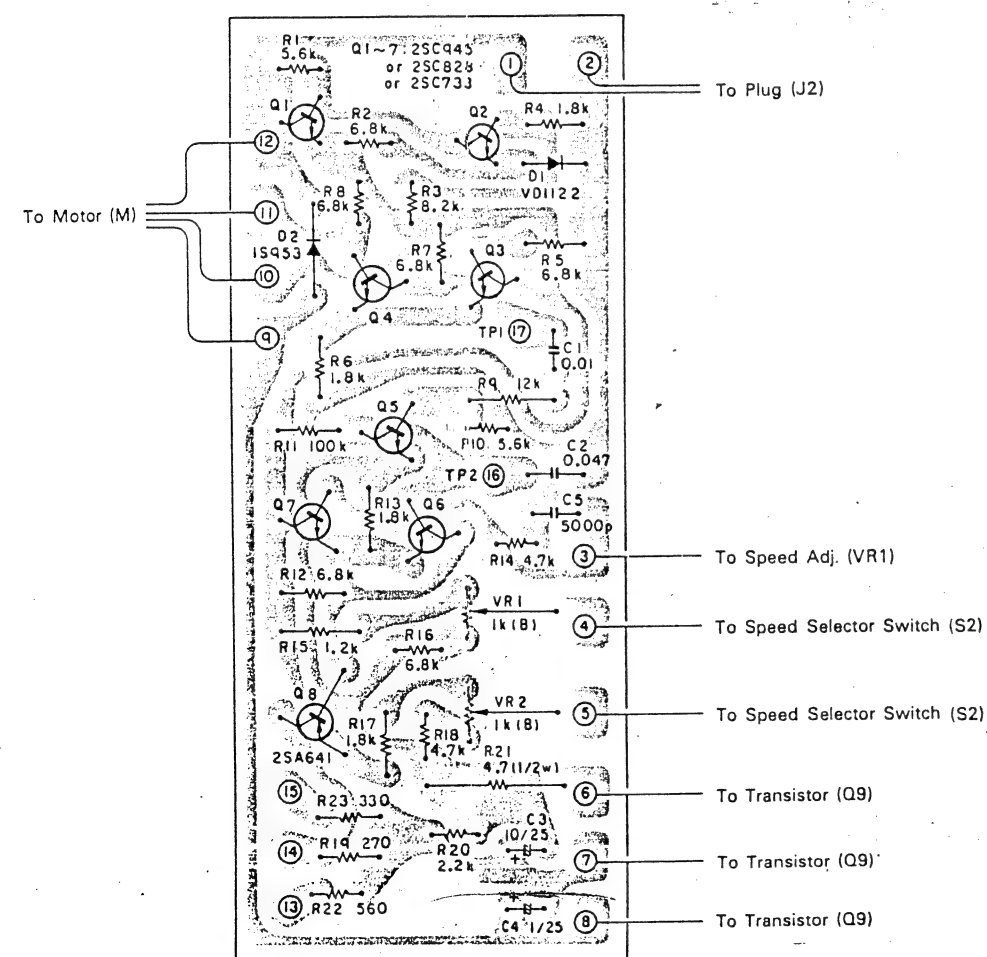


Fig. 27

PLAYER UNIT (KH-8855)

● Parts List

TRANSISTORS, DIODES AND VOLUMES

Part No.	Symbol & Description
2SC733 or 2SC828 or 2SC945	Q1—Q7
2SA641	Q8
2SC495 or	Q9
2SC1449 or 2SC1568	D1
VD1122	D2
1S953	VR1, VR2 Volume, 1 kΩ (B)
HCP-104	

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

RESISTORS

Part No.	Symbol & Description
RD1/4VS□□□□	R1—R20, R22, R23
RD1/2PS□□□□	R21

CAPACITORS

Part No.	Symbol & Description
CQMA103M50	C1
CQMA473M50	C2
CEA100P25	C3
CEA010P25	C4
CCDSL502K50	C5

● Miscellaneous Parts List

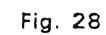
Part No.	Symbol & Description
HCG-101	C1 Ceramic 470p/AC125V
CQMA473K50	C2
CEA101P16	C3
HEL-101	IL1 Lamp
HCS-101	VR1 Volume, 500Ω (B)
HXM-104	M Motor
HSF-101	S1 Switch
HSG-103	S2 Switch
HXA-141	J1 Jack, 2P
HKS-101	J2 Connector

15. MISCELLANEOUS PARTS LIST

Part No.	Symbol & Description	Part No.	Symbol & Description
CPB-044	HD1 Head	CKN-072	J1 Jack, 2P (KH-858)
CPB-055	HD2 Head	CDE-140	J2 Shield Cord (KH-8855, KH-8833)
CAW-050	ME1 Meter	CKA-005	J3 Jack, 4P
CAW-049	ME2 Meter	CKN-071	J4 Jack, 6P
CEL-084	IL1 Lamp, 14V 60mA	CKE-002	J5 Jack, 4P
CEL-091	IL2, IL3 Lamp, 12V 55 mA	CKN-072	J6 Jack, 2P
SEL104RC	D1, D3 LED	△ CDE-505	J7 Connector (KH-8855)
SEL304GC	D2 LED	△ CDE-506	J7 Connector (KH-8833)
△ CCG-018	C1 Ceramic 0.01/AC125V	△ CDG-030	J8 AC Cord
△ CTT-121	T1 Power Transformer	△ CKP-007	J9 AC Socket (KH-858)
△ CSK-028	S1 Switch		
CSG-113	S2 Switch		
CXM-056	M Motor		
CXP-024	SO Solenoid		
CDE-139	J1 Shield Cord (KH-8855, KH-8833)		

KH-8855
KH-8833
KH-858

KH-858



17. CHASSIS EXPLODED VIEW

KH-8855
KH-8833
KH-858

NOTICE: Parts whose parts numbers are omitted are subject to being not supplied.

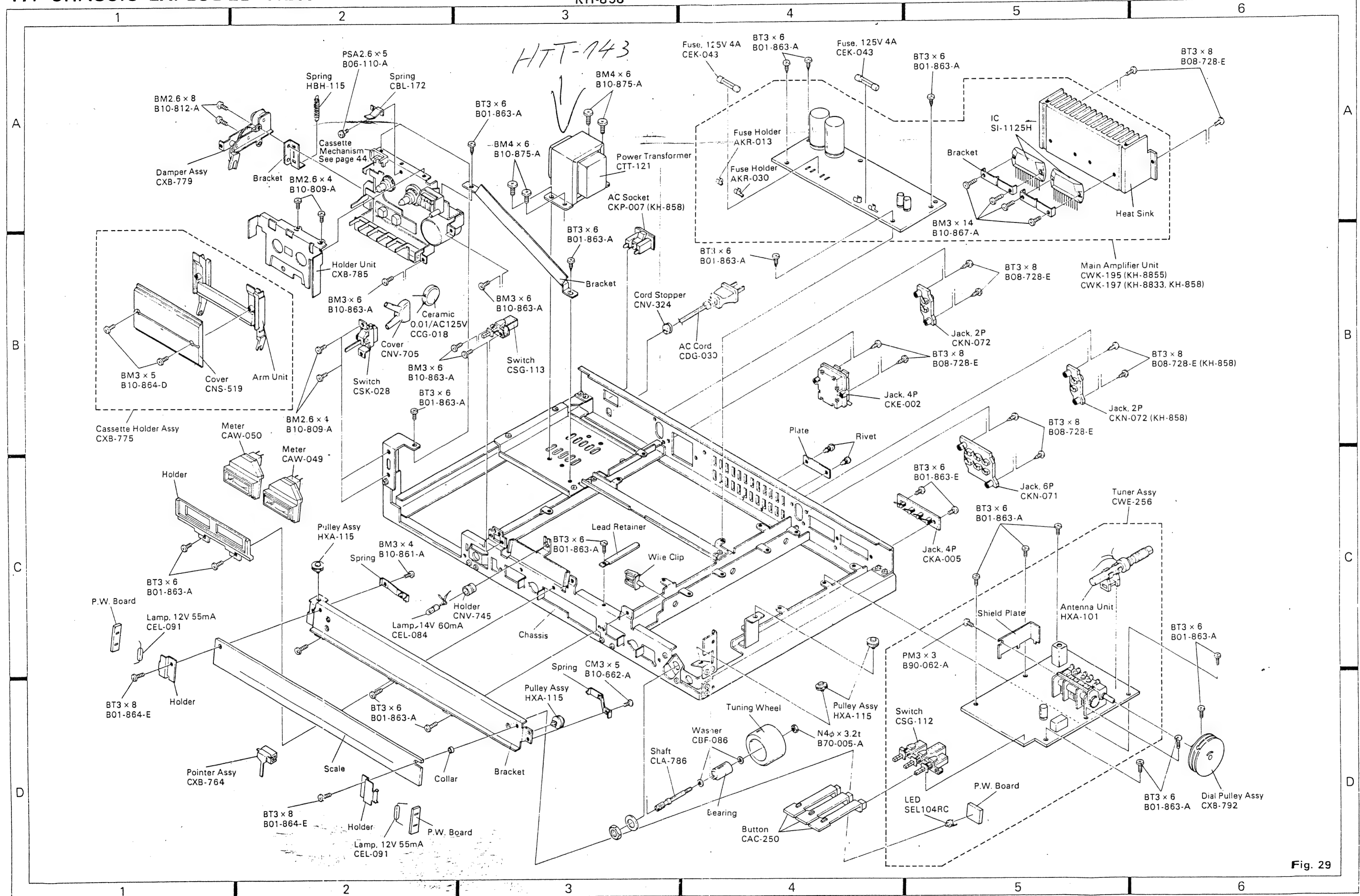
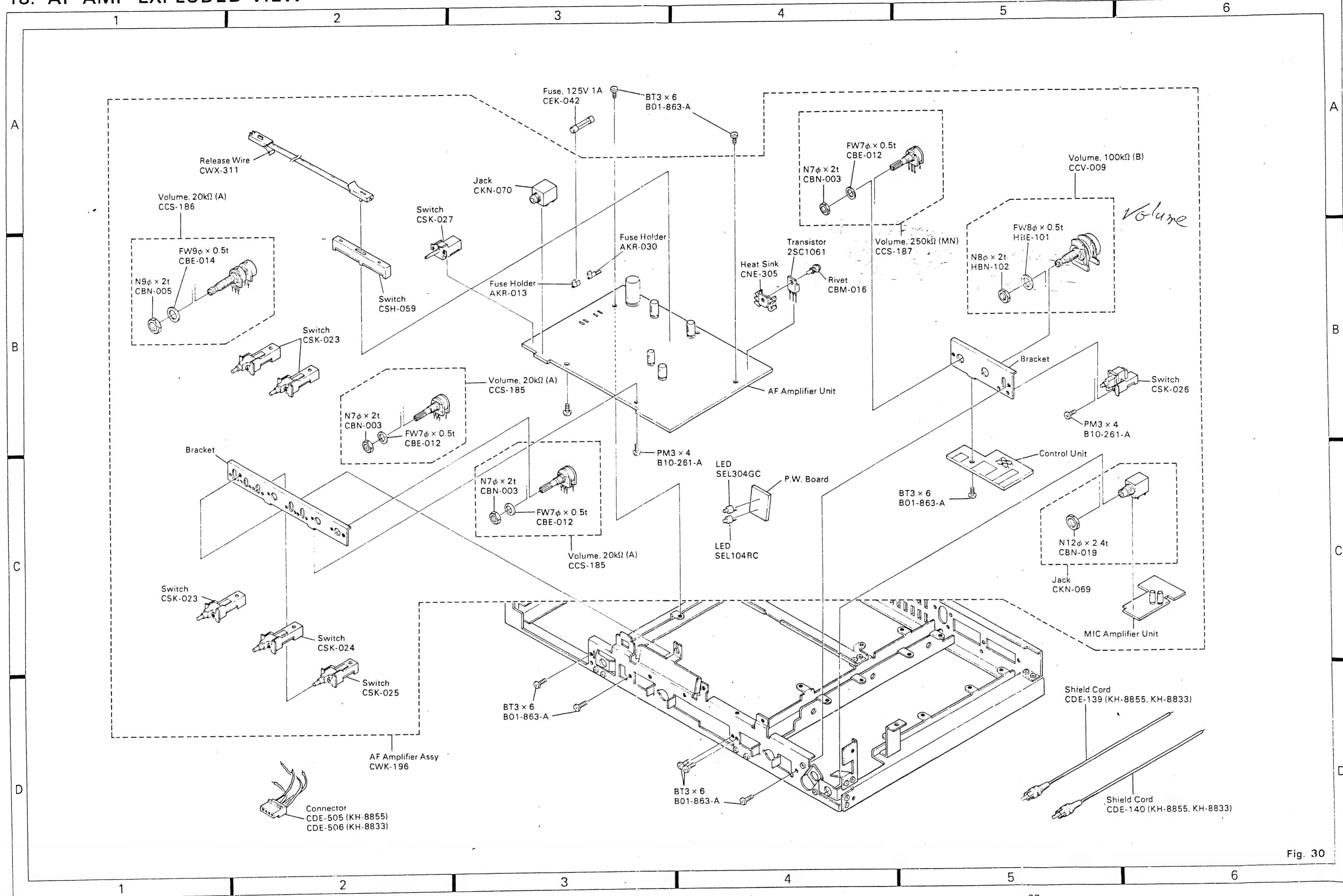


Fig. 29

18. AF AMP EXPLODED VIEW

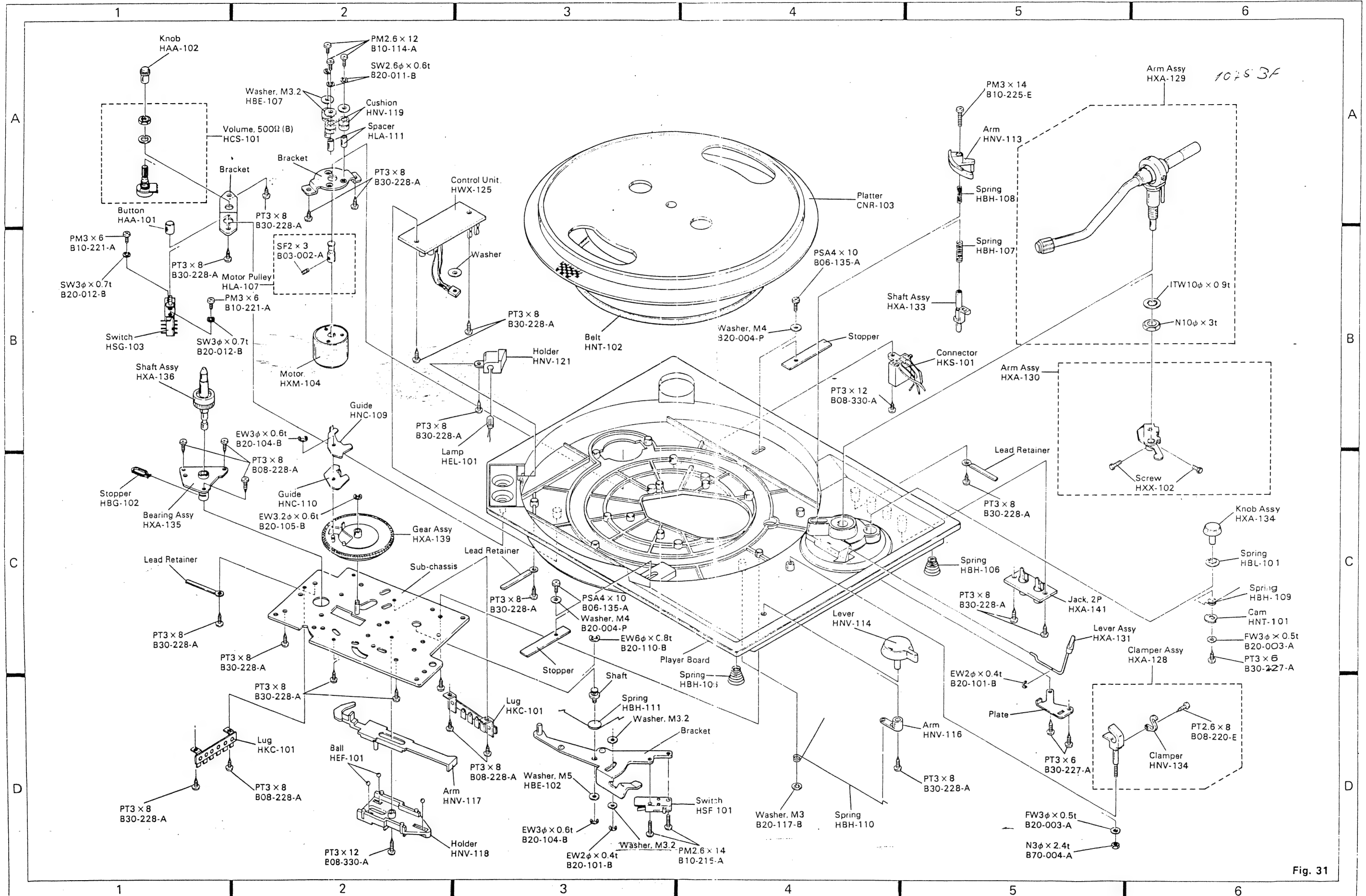
NOTICE: Parts whose parts numbers are omitted are subject to being not supplied.



19. PLAYER UNIT EXPLODED VIEW (KH-8855)

KH-8855
KH-8833
KH-858

NOTICE: Parts whose parts numbers are omitted are subject to being not supplied.



20. PACKING METHOD

KH-8855

KH-8833

KH-858

● KH-8855

NOTICE: Parts whose parts numbers are omitted are subject to being not supplied.

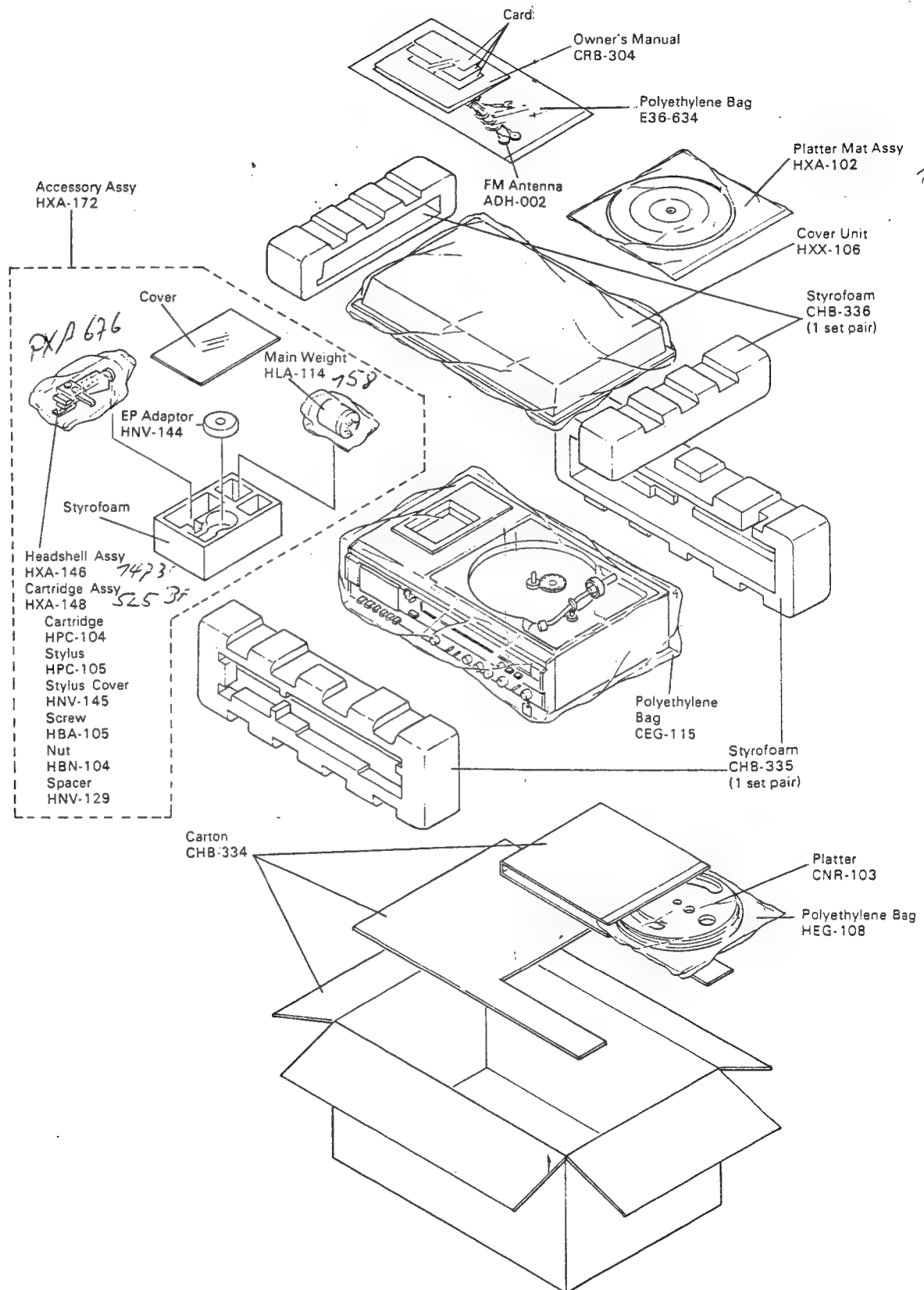


Fig. 32

● KH-8833

NOTICE: Part whose parts number is omitted is subject to being not supplied.

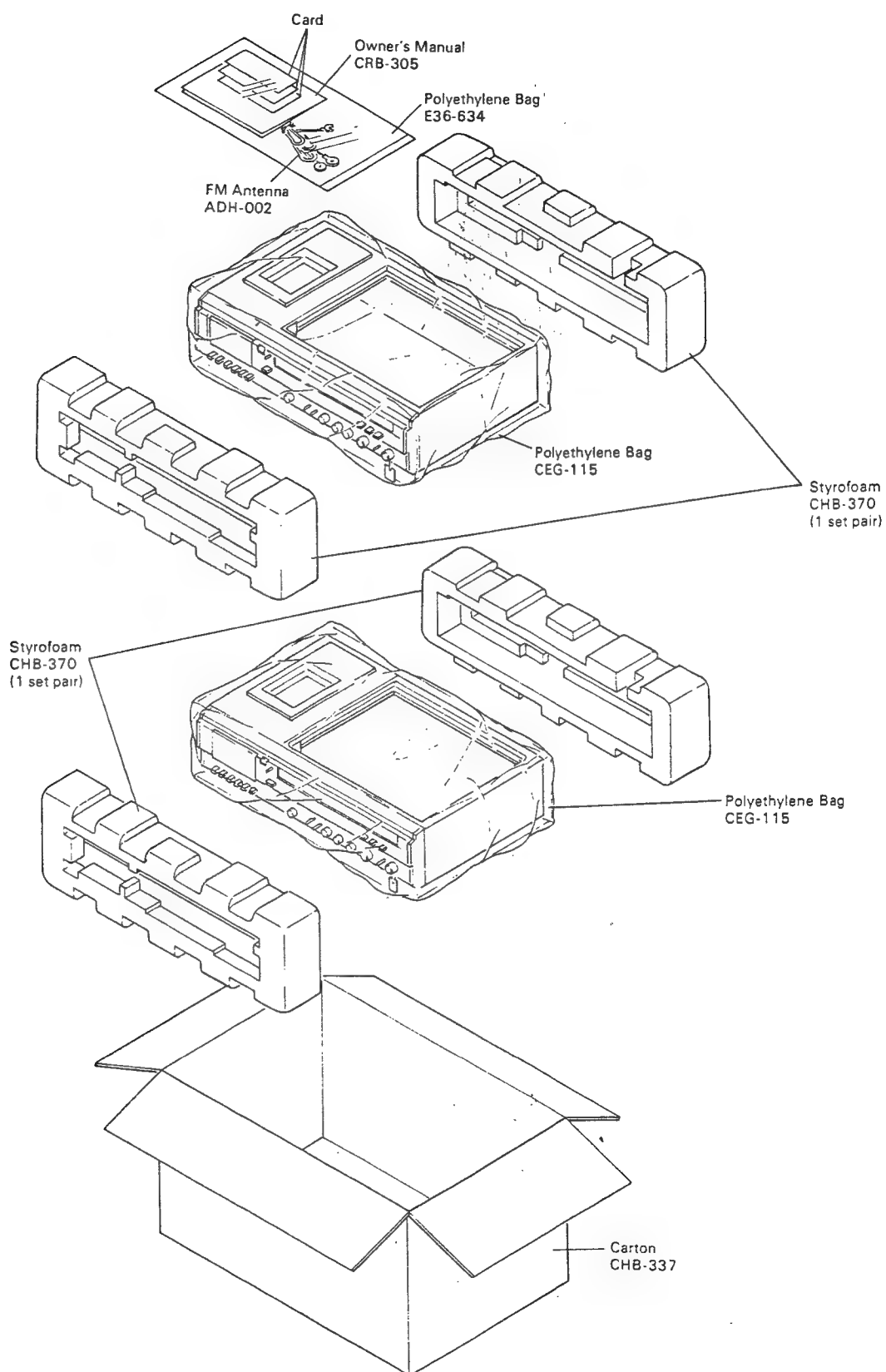


Fig. 33

● KH-858

NOTICE: Part whose parts number is omitted is subject to being not supplied

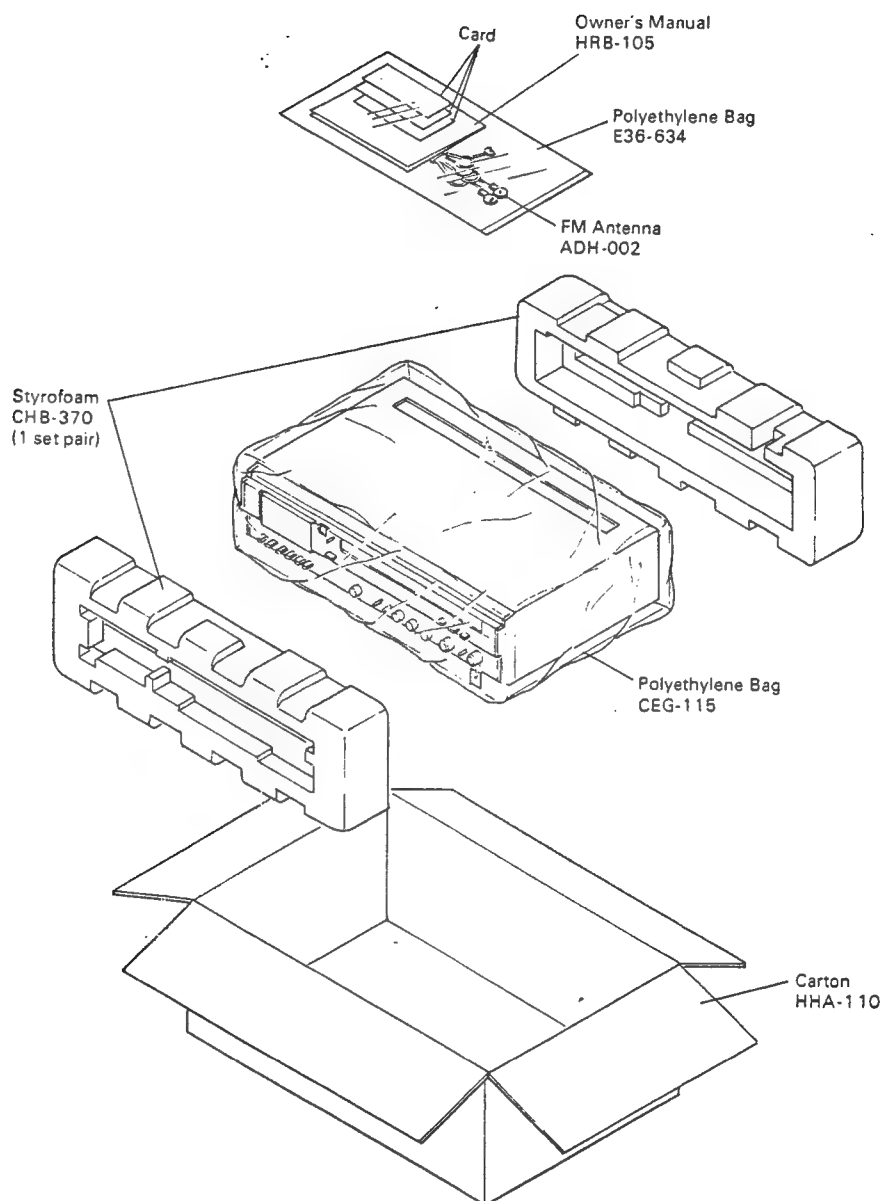


Fig. 34

21. CASSETTE MECHANISM EXPLODED VIEW (TOP)

NOTICE: Parts whose parts numbers are omitted are subject to being not supplied

KH-8855
KH-8833
KH-858

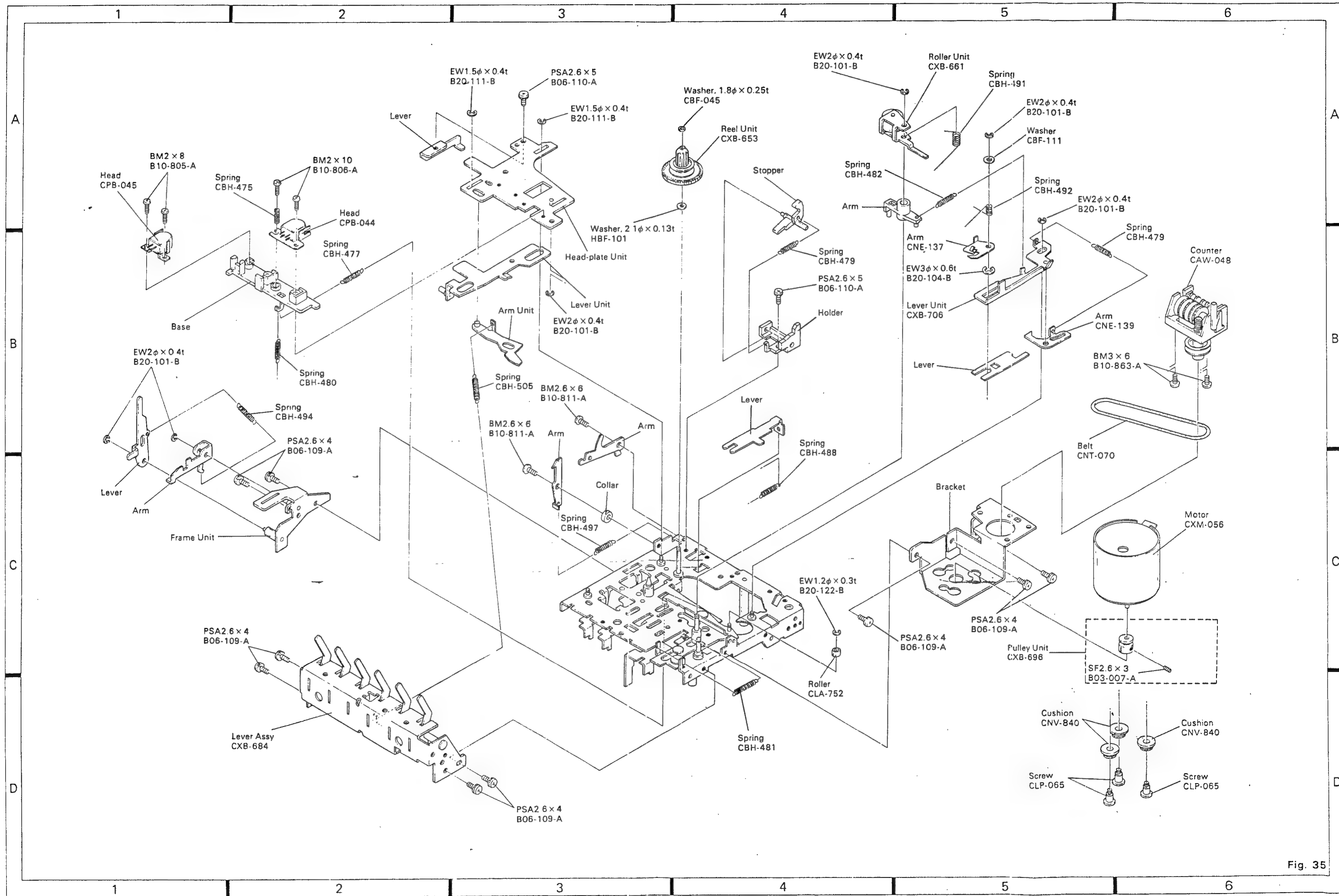


Fig. 35

22. CASSETTE MECHANISM EXPLODED VIEW (BOTTOM)

NOTICE: Parts whose parts numbers are omitted are subject to being not supplied.

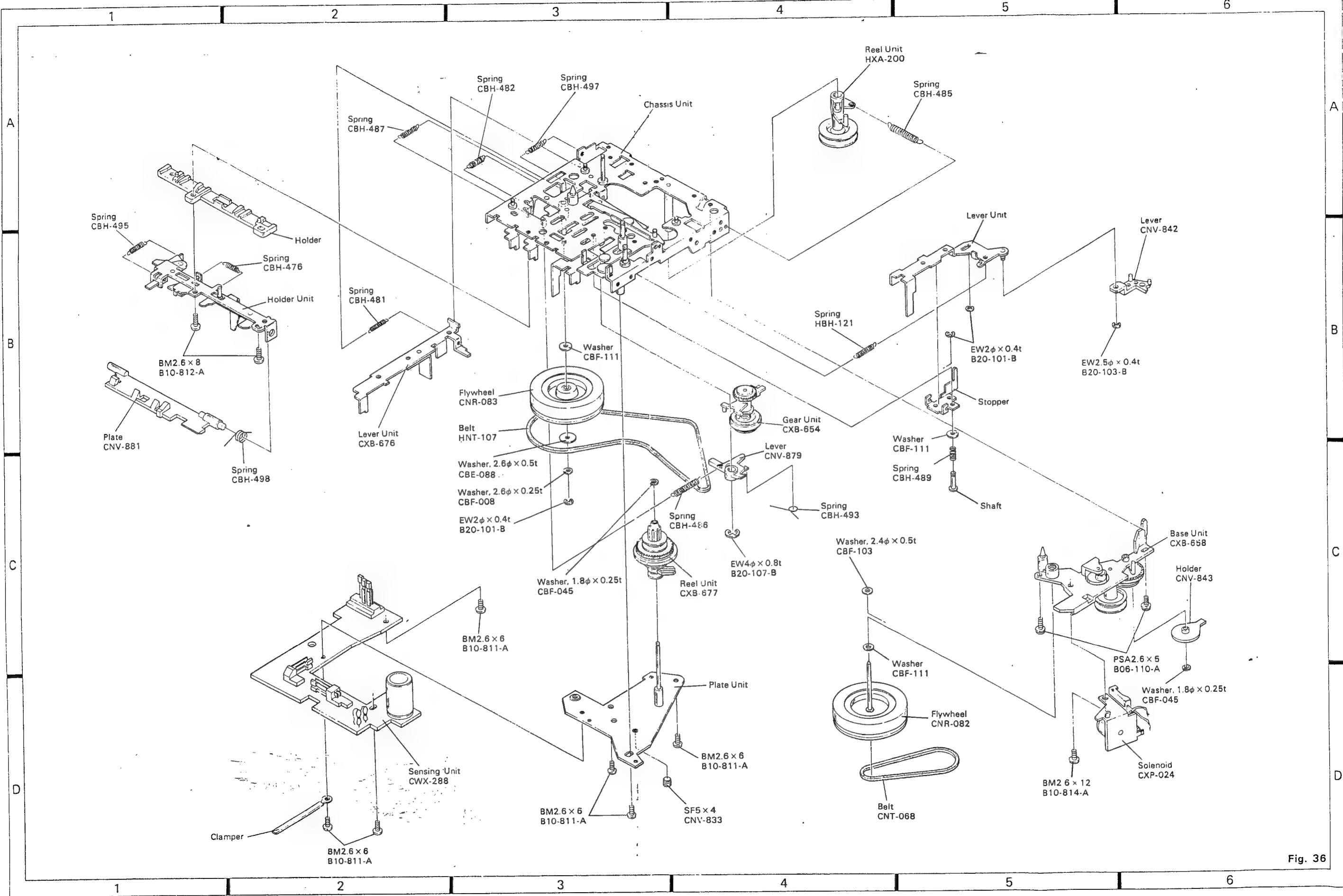


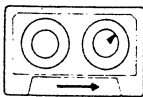
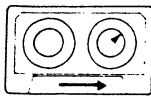
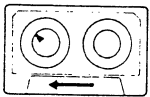
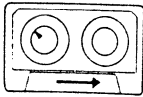
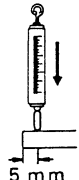
Fig. 36

23. CHECK POINTS OF CASSETTE MECHANISM

KH-8855

KH-8833

KH-858

<p>Confirm the following items when replacing parts of the cassette mechanism.</p>	<p>■ Tape speed deviation: $3.000 \pm 75 \text{ Hz}$ $(4.76 \text{ cm/s} \pm 2.5\%)$</p> <p>Using an STD-301, measure the speed at the start and end of winding and take the maximum value. Measuring time shall be 5 ~ 6 seconds.</p>	<p>■ Wow and flutter: Less than 0.3% (RMS) Less than 0.2% (WRMS)</p> <p>Using an STD-301, measure the wow and flutter at the start and end of winding and take the maximum value. If values indicated by the pointer vary considerably, adjust to 70% of the minimum and maximum values. Measuring time shall be 5 ~ 6 seconds.</p>
<p>■ Fast forward and rewinding time:</p> <p>Less than 120 seconds</p> <p>Using an C-60, set to fast forward and rewind, and measure the time with a stop watch.</p>	<p>■ Winding torque:</p> <p>38 ~ 58 g·cm</p>  <p>Using a cassette type torque meter (120 g·cm), measure the minimum value while in the play mode. Measuring time shall be 5 ~ 6 seconds.</p>	<p>■ F.F. torque:</p> <p>90 ~ 150 g·cm</p>  <p>Using a cassette type torque meter (160 g·cm), measure the value when the tape stops in the F.F. mode.</p>
<p>■ REW torque:</p> <p>90 ~ 150 g·cm</p>  <p>Using a cassette type torque meter (160 g·cm), measure the value when the tape stops in the REW mode.</p>	<p>■ Back tension torque:</p> <p>2 ~ 5 g·cm</p>  <p>After setting in the REW mode without loading a cassette tape for 5 minutes, measure the back tension torque in the play mode, using a cassette type torque meter.</p>	<p>■ Pinch roller pressure:</p> <p>170 ~ 230g</p>
<p>■ Lever operating force</p> <p>Play, Stop Less than 700g F.F. Less than 2.900g REW, Eject, Auto Repeat 2.300g REC, Pause 900g</p> 	<p>■ Clearance between flywheel and flywheel bracket</p> <p>0.05 ~ 0.25 mm</p>	

KH-8855 □ KH-8811 □ KH-858 □ KH-818 □

CASSETTE-FM/MW/SW STEREO COMPACT SYSTEM CASSETTE-FM/MW/SW STEREO COMPACT SYSTEM CASSETTE-FM/MW/SW STEREO COMPACT SYSTEM CASSETTE-FM/MW/SW STEREO COMPACT SYSTEM

SERVICE MANUAL

Subject: This Service Manual mentions only the items not included in the Service Manual of KH-8855/KU. It is therefore advisable to use this Manual together with KH-8855/KU Service Manual.

SPECIFICATIONS

Amplifier

Music power	
KH-8855, KH-858	90W
KH-8811, KH-818	50W
Continuous power output (Both channels driven)	
KH-8855, KH-858	22W + 22W (40 ~ 20 kHz, 0.7%, 8Ω) 24W + 24W (1 kHz, 1%, 8Ω)
KH-8811, KH-818	13W + 13W (40 ~ 20 kHz, 1%, 8Ω) 15W + 15W (1 kHz, 1%, 8Ω)
PHONO frequency response	30 ~ 20,000 Hz 70 ~ 15,000 Hz ± 0.7 dB (RIAA equalization)
Input sensitivity/impedance	PHONO: 2.5 mV/50kΩ AUX: 150 mV/30kΩ MIC: 3.5 mV/5kΩ TAPE MONI: 150 mV/30kΩ
Output level/impedance	REC OUT: 150 mV/3kΩ HEADPHONE: 8Ω SPEAKER: 8Ω

Tuner Section

FM	
Frequency range	88 ~ 108 MHz
Usable sensitivity	10.7 dBf (1.9μV)
50 dB quieting sensitivity	60 dB
Signal-to-noise ratio (65 dBf)	70 dB (mono) 65 dB (stereo)
SW	
Frequency range	6.0 ~ 18.0 MHz
Usable sensitivity	30μV (Ext. antenna)
MW	
Frequency range	525 ~ 1,605 kHz
Usable sensitivity	160μV/m (Bar antenna)
Selectivity	25 dB

Cassette Section


Wow and flutter	0.12% (WRMS)
Frequency range	30 ~ 13,000 Hz (Normal tape) 30 ~ 14,000 Hz (Chrome tape)
Signal-to-noise ratio	Dolby ON: 60 dB Dolby OFF: 51 dB
Cross talk	40 dB
Channel separation	35 dB (at 1 kHz)

Turntable Section

KH-8855	
Wow and flutter	0.08% (WRMS)
Speed	33-1/3, 45 (rpm)
Platter	320 mm diam. aluminum alloy die-cast
Drive system	Belt-drive
Motor	FG-servo DC motor
Pitch control range	± 2%
Stylus	PN-K85
Recommended stylus pressure	2.5g ± 0.5
KH-8811	
Wow and flutter	0.12% (WRMS)
Speed	33-1/3, 45 (rpm)
Platter	300 mm diam.
Drive system	Belt-drive
Motor	AC synchronous motor
Stylus	PN-K85
Recommended stylus pressure	2.5g

Miscellaneous

Power source	AC 120/220/240V 50/60 Hz
Power consumption	
KH-8855, KH-858	80W
KH-8811, KH-818	50W
Dimensions (W × H × D)	
KH-8855, KH-8811	631 × 185 × 390 mm (24-3/4 × 7-1/4 × 15-3/8 in.)
KH-858, KH-818	631 × 135 × 395 mm (24-3/4 × 5-3/8 × 15-1/2 in.)
Weight	
KH-8855	13.3 kg (29.3 lbs.)
KH-8811	12.9 kg (28.4 lbs.)
KH-858	10.1 kg (22.2 lbs.)
KH-818	10 kg (22 lbs.)

"The word 'Dolby' and  are trade marks of Dolby Laboratories."

Note:

Specifications and the design subject to possible modification without notice due to improvements.

ADJUSTMENT

MW ADJUSTMENT

● Connection Diagram

Switch positions

Function switch TUN

Band switch MW

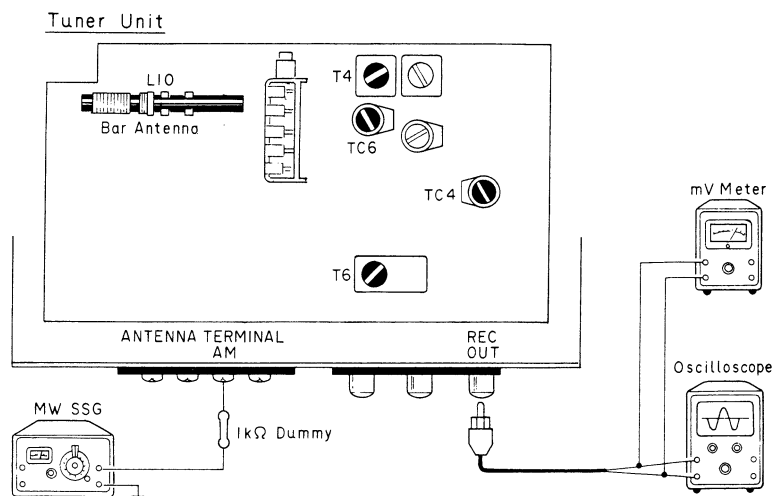


Fig. 1

● To Adjust

1. Set SSG at 400 Hz, 30% modulation.
2. Add the output signal of 600 kHz, 60 dB from SSG to the unit, and tune in to 600 kHz on the dial scale.
3. Adjust T4 so that the output will be maximum.
4. Add the output signal of 1,400 kHz from SSG to the unit, and tune in to 1,400 kHz on the dial scale.
5. Adjust TC6 so that the output will be maximum.
6. Repeat (2) ~ (5) above several times, and adjust the output to be maximum at 600 kHz, 1,400 kHz.
7. Set SSG to an output of 30 dB, and adjust the Bar Antenna coil (600 kHz) and TC4 (1,400 kHz) repeatedly so that its output level is highest at 600 kHz and 1,400 kHz.
8. Add the output signal of 1,000 kHz from SSG to the unit, and tune in to 1,000 kHz on the dial scale.
9. Adjust T6 for the output to the maximum.

SW ADJUSTMENT

● Connection Diagram

Switch positions

Function switch TUN

Band switch SW

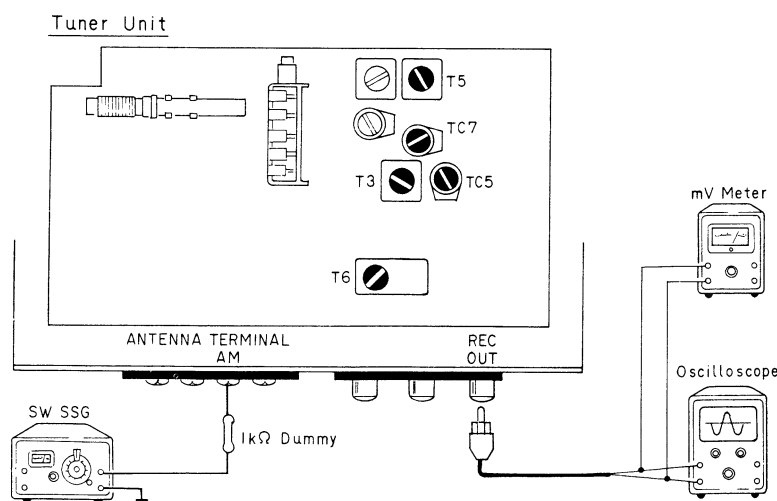


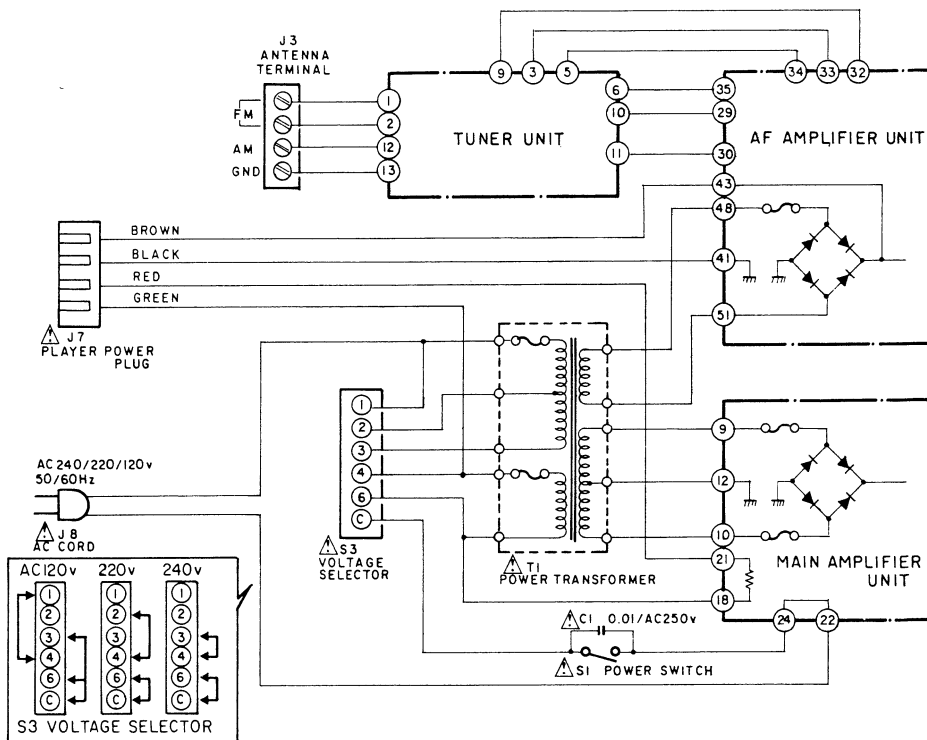
Fig. 2

● To Adjust

1. Set SSG at 400 Hz, 30% modulation.
2. Add the output signal of 7.3 MHz, 60 dB from SSG to the unit, and tune in to 7.3 MHz on the dial scale.
3. Adjust T5 so that the output will be maximum.
4. Add the output signal of 17 MHz from SSG to the unit, and tune in to 17 MHz on the dial scale.
5. Adjust TC7 so that the output will be maximum.
6. Repeat (2) ~ (5) above several times, and adjust the output to be maximum at 7.3 MHz, 17 MHz.
7. Set SSG to an output of 30 dB, and adjust the T3 (7.3 MHz) and TC5 (17 MHz) repeatedly so that its output level is highest at 7.3 MHz and 17 MHz.
8. Add the output signal of 12 MHz from SSG to the unit, and tune in to 12 MHz on the dial scale.
9. Adjust T6 for the output to be maximum.

SCHEMATIC CIRCUIT DIAGRAM (KH-8855)

KH-8855
KH-8811
KH-858
KH-818

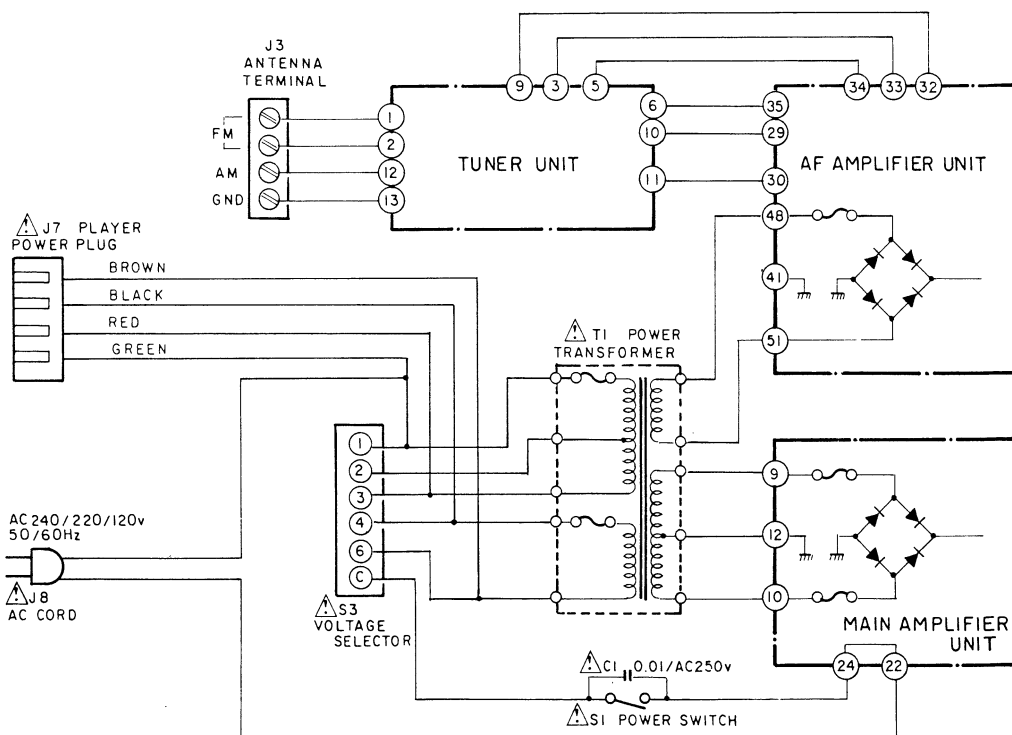


Note:

The Δ mark found on one component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Fig. 3

SCHEMATIC CIRCUIT DIAGRAM (KH-8811)

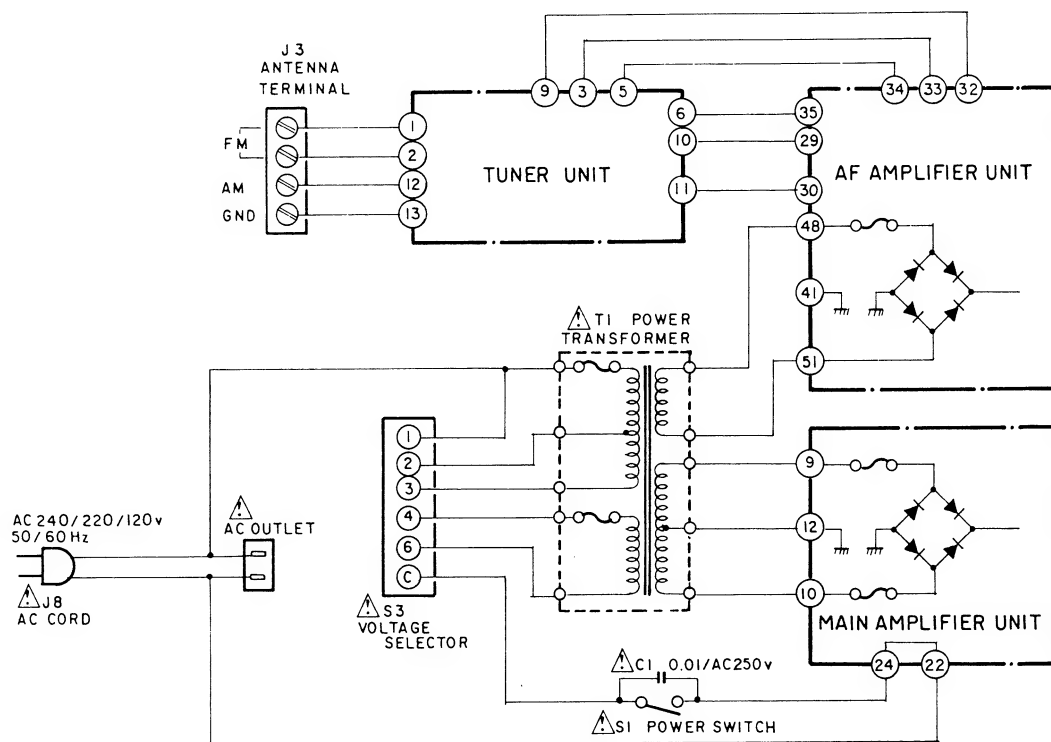


Note:

The Δ mark found on one component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Fig. 4

SCHEMATIC CIRCUIT DIAGRAM (KH-858•KH-818)



Note:

The mark found on one component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Fig. 5

Fig. 6

● Parts Connection

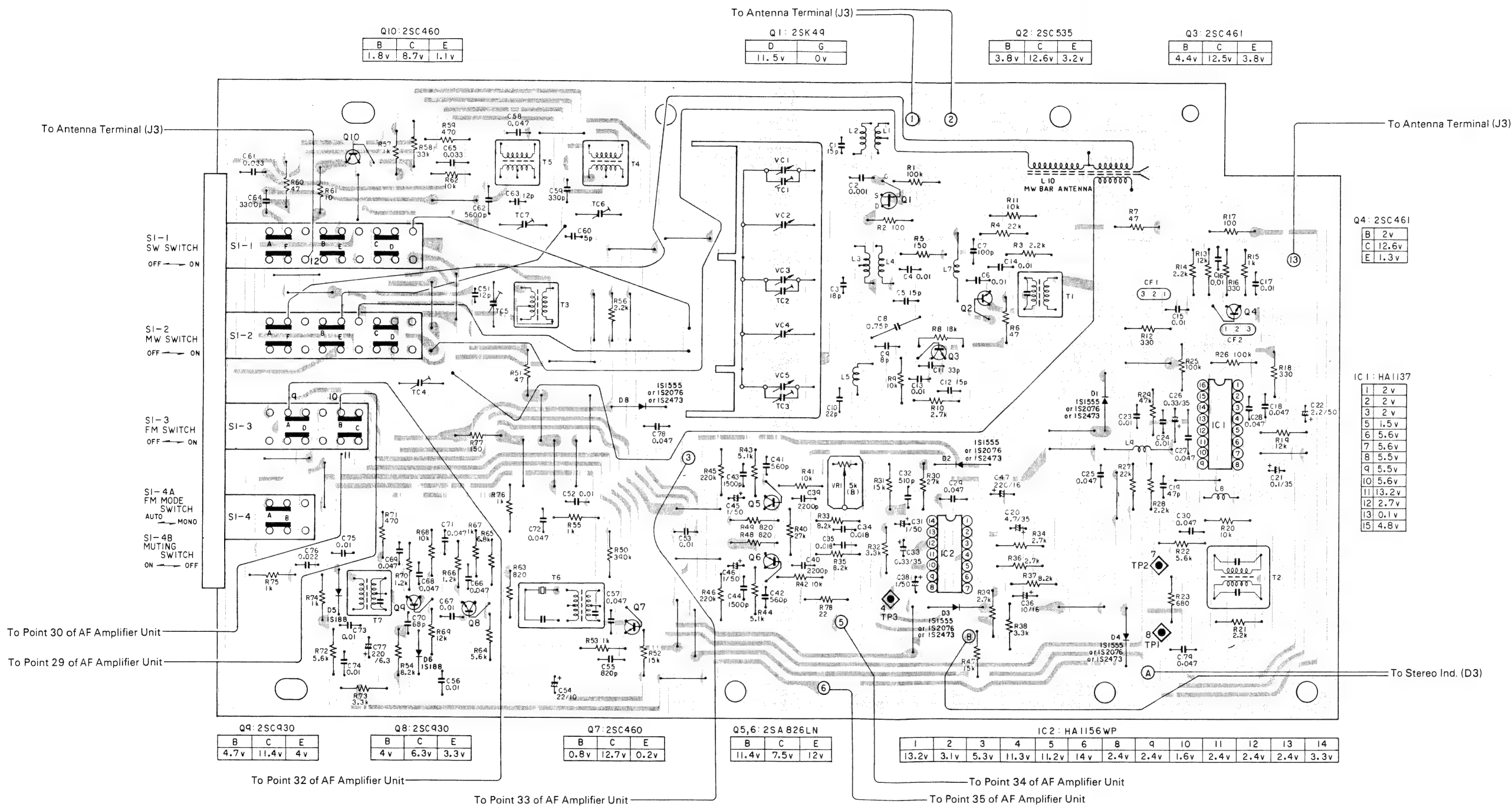


Fig. 7

TUNER UNIT

● Parts List

NOTE:

When ordering resistors, first covert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	56×10 ¹	561.....	RD1/4PS	561 J
47kΩ	47×10 ³	473.....	RD1/4PS	473 J
0.5Ω	0R5		RN2H	0R5 K
1Ω	010.....		RS1P	010 K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	562×10 ¹	RN1/4SR	5621 F
--------	---------------------------	---------	--------

MISCELLANEOUS

Part No.	Symbol & Description	
HA1137	IC1	
HA1156WP	IC2	
2SK49-H2	Q1	
2SC535-C	Q2	
2SC461-C	Q3, Q4	
2SA826LN	Q5, Q6	
2SC460-C	Q7	
2SC930-D	Q8, Q9	
2SC460-B	Q10	
1S1555	D1 – D4, D8	
(1S2076)		
(1S2473)		
1S188-FM1	D5, D6	
CTC-100	L1	Coil
CTC-117	L2	Coil
HTC-118	L3	Coil
CTC-102	L4	Coil
HTC-119	L5	Coil
VACANT	L6	
CTH-037	L7, L9	Coil
CTF-071	L8	Micro Inductor
HXA-111	L10	Antenna Unit
CTF-038	CF1, CF2	Ceramic Filter
CCP-057	VR1	Semi Fixed, 5kΩ (B)
HCK-101	TC1, TC2, VC1 – VC4,	Variable Condenser
CCG-026	TC4, TC6	Trimmer
CCG-025	TC5, TC7	Trimmer
CTC-073	T1	IF Transformer
CTC-074	T2	Coil
HTA-101	T3	Coil
CTB-040	T4	Coil
CTA-043	T5	Coil
CTE-085	T6	IF Transformer
CTE-001	T7	Coil
HSG-101	S1	Switch

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

RESISTORS

Part No.	Symbol & Description
RD1/8PS□□□J	R1 – R23, R25 – R78
VACANT	R24

CAPACITORS

Part No.	Symbol & Description
CCDUJ150K50	C1
CKDYB102K50	C2
CCDUJ180K50	C3
CKDYF103Z25	C4, C6, C13 – C17, C23, C24, C56, C67, C73 – C75
CCDCH150K50	C5, C12
CCDSL101K50	C7
CGBR75K500	C8
CCDLH080F50	C9
CCDLH220K50	C10
CCDCH330K50	C11
CKDYF473Z25	C18, C25, C27, C28, C30, C57, C58, C66, C68, C69, C71, C72, C78, C79
CCDSL470K50	C19
CEA4R7P35	C20
CSZA0R1M35	C21
CEA2R2P50	C22
CSZAR33M35	C26, C33
CQMA473K50	C29
CEA010P50	C31, C38, C45, C46

TUNER UNIT

Parts No.	Symbol & Description
CQSH511J50	C32
CQMA183K50	C34, C35
CEA100P16	C36
VACANT	C37
CKDYB222K50	C39, C40
CKDYB561K50	C41, C42
CKDYB152K50	C43, C44
CEA221P16	C47
VACANT	C48 — C50
CCDSH120F50	C51
CQMA103M50	C52, C53
CEA220P10	C54
CKDYB821K50	C55
CQSH331J50	C59
CCDSH050F50	C60
CQMA333M50	C61, C65
CQSH562K50	C62
CCDXK120J50	C63
CQMA332M50	C64
CCDSL680K50	C70
CQMA223K50	C76
CEA221P6R3	C77

List of changed parts information will be furnished whenever necessary and you are requested to amend parts number in this parts list.

List of Changed Parts for Factory Modification

Symbol	Part No.	Description

PARTS LIST

AF AMPLIFIER UNIT (KH-8855, KH-858)

KU		D	
Part No.	Symbol & Description	Part No.	Symbol & Description
RD1/4PS154J	R63, R64		Deleted

AF AMPLIFIER UNIT (KH-8811, KH-818)

KU		D	
Part No.	Symbol & Description	Part No.	Symbol & Description
WZ-157	D10	WZ-135	D10
BZ-150	D11	BZ-130	D11
△ CEK-042	FU1 Fuse, 125V 1A	△ HEK-104	FU1 Fuse, 125V 1A
RD1/4PS102J	R19, R20	RD1/4PS112J	R19, R20
RD1/4PS183J	R21, R22	RD1/4PS153J	R21, R22
RD1/4PS154J	R63, R64		Deleted
RD1/4PS122J	R129	⇒ RD1/4PS821J	R129
RD1/4PS181J	R130	RD1/4PS151J	R130
△ RS1P150K	R131	△ RN1P4R7K	R131
△ RS2P391K	R132	△ RS2P181K	R132
△ RS1P101K	R133		Deleted
CEA101P35	C93	CEA101P25	C93
		CCDSL820K50	C101, C102

KU		D	
Part No.	Symbol & Description	Part No.	Symbol & Description
⚠ CEK-043	FU1, FU2 Fuse, 125V 4A	⚠ HEK-105	FU1, FU2 Fuse, 125V 4A
⚠ RD1/2PS335J	R21	⚠ CKDYF103Z25	C24

KU		D	
Part No.	Symbol & Description	Part No.	Symbol & Description
△ SI-1125H	IC	△ SI-1120H	IC
△ ERC04-02AH	D1 - D4	△ SIB01-02	D1 - D4
△ CEK-043	FU1, FU2 Fuse, 125V 4A	△ HEK-106	FU1, FU2 Fuse, 125V 3A
△ RD1/2PS335J	R21	△ CKDYF103Z25	C24
△ RS2P123K	R22 (KH-8855)		Deleted
△ HCH-103 or CCH-003	Electrolytic, 4700μ/35V	△ HCH-104 or CCH-041	Electrolytic, 4700μ/25V

Fig. 8

Part No.	Symbol & Description	
HCL-103	C1, C2	Oil Filled Paper, 0.047/AC 1500V
HXM-106	M	Motor
HSF-104	S1, S2	Switch
HXA-141	J1	Jack, 2P
HKS-104	J2	Connector

PARTS LIST

MISCELLANEOUS PARTS LIST

KU			D		
Part No.	Symbol & Description		Part No.	Symbol & Description	
△ CCG-018	C1	Ceramic, 0.01/AC 125V	△ CCG-003	C1	Ceramic, 0.01/AC 250V
△ CTT-121	T1	Power, Transformer	△ HTT-101	T1	Power Transformer (KH-8855, KH-858)
			△ HTT-102	T1	Power Transformer (KH-8811, KH-818)
			⇒		
△ CSK-028	S1	Switch	△ CSK-032	S1	Switch
△ CDE-506	J7	Connector (KH-8833)	HKP-101	S3	Voltage Selector
△ CDG-030	J8	AC Cord		Deleted	
			△ HDG-103	J8	AC Cord

EXPLODED VIEW PARTS LIST

KU		D	
Part No.	Symbol & Description	Part No.	Symbol & Description
CXB-773	Escutcheon Assy (KH-8855)	HXA-107	Escutcheon Assy (KH-8855)
		HXA-108	Escutcheon Assy (KH-8811)
		HXA-198	Escutcheon Assy (KH-858)
		HXA-109	Escutcheon Assy (KH-818)
CXB-381	Hinge Unit	CXB-593	Hinge Unit (KH-8855, KH-8811)
HXX-106	Cover Unit	HXX-107	Cover Unit (KH-8855, KH-8811)
CBA-078	Screw	CBA-078	Screw (KH-8855, KH-8811)
		CBA-079	Screw (KH-8811)
CWE-256	Tuner Assy	HWE-101	Tuner Assy
CWK-195	Main Amplifier Unit	HWK-101	Main Amplifier Unit (KH-8855, KH-858)
		HWK-113	Main Amplifier Unit (KH-8811, KH-818)
CNV-705	Cover	HNV-149	Cover
		CKC-034	Lug
CWK-196	AF Amplifier AssY	CWK-196	AF Amplifier Assy (KH-8855, KH-858)
		CWK-198	AF Amplifier Assy (KH-8811, KH-818)
		HAN-108	Lavel
HNV-114	Lever	HNV-115	Lever (KH-8855, KH-8811)
HXA-102	Platter Mat Assy	HXA-104	Platter Mat Assy (KH-8855)
		HXA-105	Platter Mat Assy (KH-8811)
HXA-172	Accessory Assy	⇒ HXA-158	Accessory Assy (KH-8855)
		HXA-159	Accessory Assy (KH-8811)
HNV-144	EP Adaptor	HNV-135	EP Adaptor (KH-8855, KH-8811)
HXA-146	Headshell Assy	HXA-145	Headshell Assy (KH-8855)
		HXA-157	Headshell (KH-8855)
HXA-148	Cartridge Assy		Deleted
HPC-104	Cartridge		Deleted
HPC-105	Stylus	HPC-103	Stylus (KH-8855)
HNV-145	Stylus Cover	HNV-131	Stylus Cover (KH-8855)
HBN-104	Nut		Deleted
HNV-129	Spacer		Deleted
		HDX-102	AM Antenna
CRB-304	Owner's Manual	HRB-102	Owner's Manual (KH-8855)
		HRB-103	Owner's Manual (KH-8811)
		HRB-117	Owner's Manual (KH-858)
		HRB-104	Owner's Manual (KH-818)
CHB 334	Carton	HHA-106	Carton (KH-8855)
		HHA-107	Carton (KH-8811)
		HHA-171	Carton (KH-858)
		HHA-108	Carton (KH-818)

PLAYER EXPLODED VIEW (KH-8811)

NOTICE: Parts whose parts numbers are omitted are subject to being not supplied.

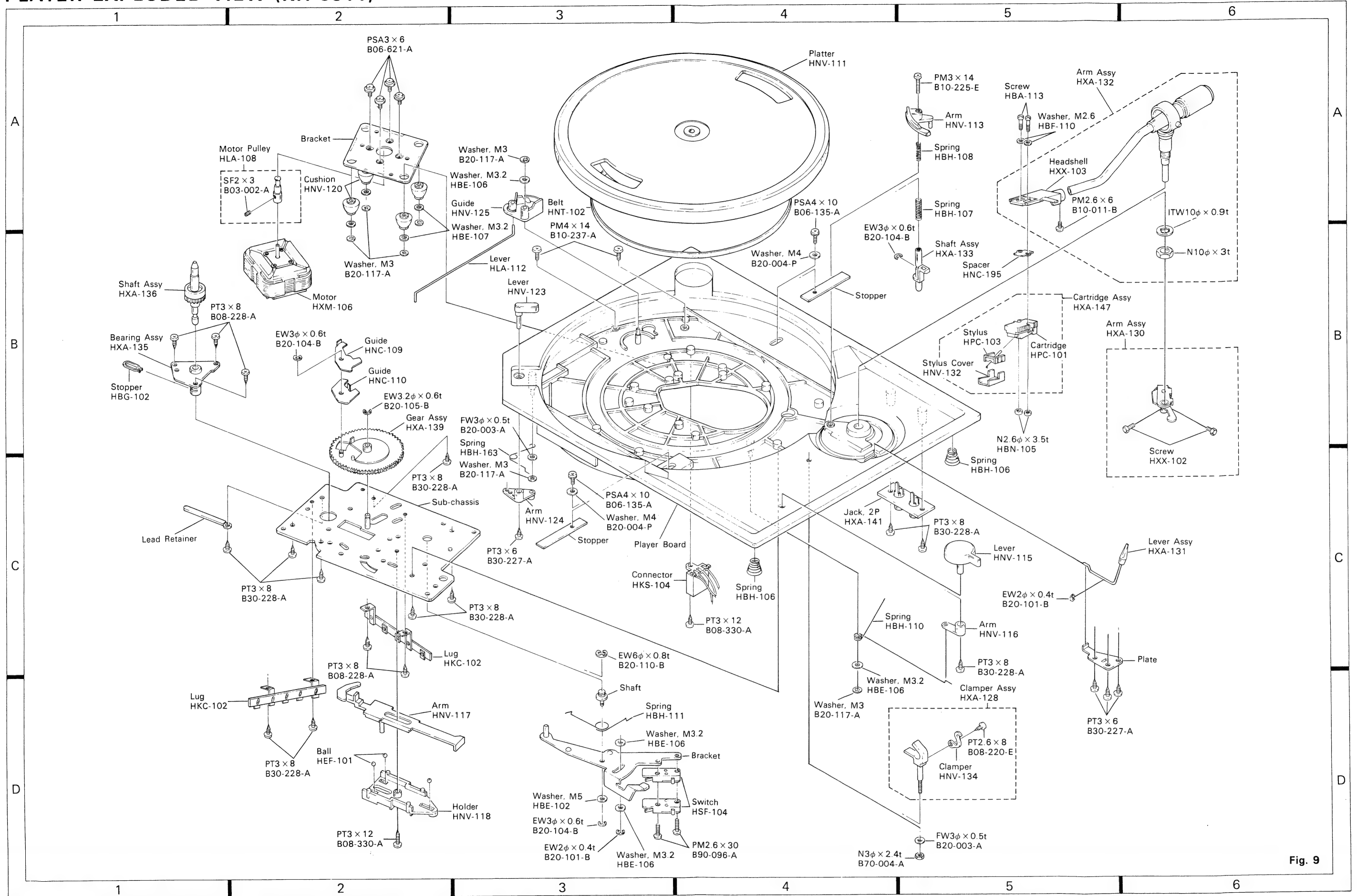


Fig. 9

KH-8855 ▢ **KH-8811** ▢ **KH-858** ▢ **KH-818** ▢

CASSETTE-FM/MW/SW STEREO CASSETTE-FM/MW/SW STEREO CASSETTE-FM/MW/SW STEREO CASSETTE-FM/MW/SW STEREO
COMPACT SYSTEM COMPACT SYSTEM COMPACT SYSTEM COMPACT SYSTEM

SERVICE MANUAL

Subject: This Service Manual mentions only the items not included in the Service Manual of KH-8855/KU. It is therefore advisable to use this Manual together with KH-8855/KU Service Manual.

SPECIFICATIONS

Amplifier

Music power	
KH-8855, KH-858	90W
KH-8811, KH-818	50W
Continuous power output (Both channels driven)	
KH-8855, KH-858	22W + 22W (40 ~ 20 kHz, 0.7%, 8Ω) 24W + 24W (1 kHz, 1%, 8Ω)
KH-8811, KH-818	13W + 13W (40 ~ 20 kHz, 1%, 8Ω) 15W + 15W (1 kHz, 1%, 8Ω)
PHONO frequency response	30 ~ 20,000 Hz 70 ~ 15,000 Hz ± 0.7 dB (RIAA equalization)
Input sensitivity/impedance	PHONO: 2.5 mV/50kΩ AUX: 150 mV/30kΩ MIC: 3.5 mV/5kΩ TAPE MONI: 150 mV/30kΩ
Output level/impedance	REC OUT: 150 mV/3kΩ HEADPHONE: 8Ω SPEAKER: 8Ω

Tuner Section

FM	
Frequency range	88 ~ 108 MHz
Usable sensitivity	10.7 dBf (1.9 μ V)
50 dB quieting sensitivity	60 dB
Signal-to-noise ratio (65 dBf)	70 dB (mono)
	65 dB (stereo)
SW	
Frequency range	6.0 ~ 18.0 MHz
Usable sensitivity	30 μ V (Ext. antenna)
MW	
Frequency range	525 ~ 1,605 kHz
Usable sensitivity	160 μ V/m (Bar antenna)
Selectivity	25 dB

Cassette Section

Wow and flutter	0.12% (WRMS)
Frequency range	30 ~ 13,000 Hz (Normal tape) 30 ~ 14,000 Hz (Chrome tape)
Signal-to-noise ratio	Dolby ON: 60 dB Dolby OFF: 51 dB
Cross talk	40 dB
Channel separation	35 dB (at 1 kHz)

Turntable Section

KH-8855	
Wow and flutter	0.08% (WRMS)
Speed	33-1/3, 45 (rpm)
Platter	320 mm diam. aluminum alloy die-cast
Drive system	Belt-drive
Motor	FG-servo DC motor
Pitch control range	±2%
Stylus	PN-K85
Recommended stylus pressure	2.5g ± 0.5
KH-8811	
Wow and flutter	0.12% (WRMS)
Speed	33-1/3, 45 (rpm)
Platter	300 mm diam.
Drive system	Belt-drive
Motor	AC synchronous motor
Stylus	PN-K85
Recommended stylus pressure	2.5g

Miscellaneous

Power source	AC 120/220/240V 50/60 Hz
Power consumption	
KH-8855, KH-858	80W
KH-8811, KH-818	50W
Dimensions (W × H × D)	
KH-8855, KH-8811	631 × 185 × 390 mm (24-3/4 × 7-1/4 × 15-3/8 in.)
KH-858, KH-818	631 × 135 × 395 mm (24-3/4 × 5-3/8 × 15-1/2 in.)
Weight	
KH-8855	13.3 kg (29.3 lbs.)
KH-8811	12.9 kg (28.4 lbs.)
KH-858	10.1 kg (22.2 lbs.)
KH-818	10 kg (22 lbs.)

"The word 'Dolby' and are trade marks of Dolby Laboratories."

Note:

Specifications and the design subject to possible modification without notice due to improvements.

ADJUSTMENT

MW ADJUSTMENT

● Connection Diagram

Switch positions

Function switch TUN
Band switch MW

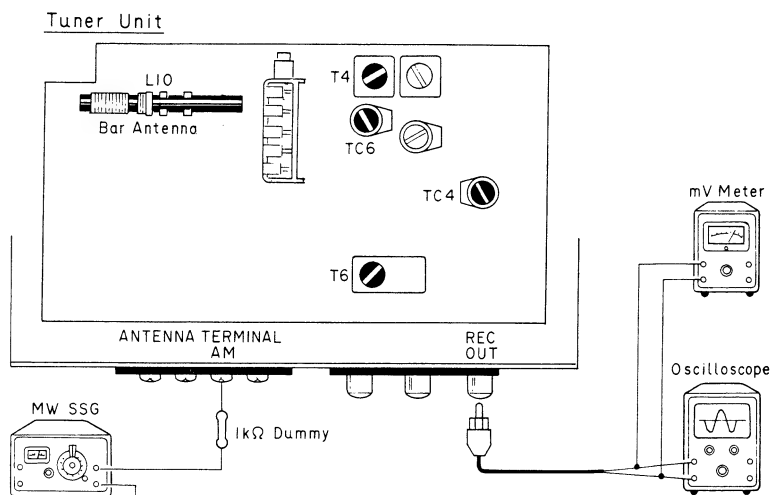


Fig. 1

● To Adjust

1. Set SSG at 400 Hz, 30% modulation.
2. Add the output signal of 600 kHz, 60 dB from SSG to the unit, and tune in to 600 kHz on the dial scale.
3. Adjust T4 so that the output will be maximum.
4. Add the output signal of 1,400 kHz from SSG to the unit, and tune in to 1,400 kHz on the dial scale.
5. Adjust TC6 so that the output will be maximum.
6. Repeat (2) ~ (5) above several times, and adjust the output to be maximum at 600 kHz, 1,400 kHz.
7. Set SSG to an output of 30 dB, and adjust the Bar Antenna coil (600 kHz) and TC4 (1,400 kHz) repeatedly so that its output level is highest at 600 kHz and 1,400 kHz.
8. Add the output signal of 1,000 kHz from SSG to the unit, and tune in to 1,000 kHz on the dial scale.
9. Adjust T6 for the output to the maximum.

SW ADJUSTMENT

● Connection Diagram

Switch positions

Function switch TUN
Band switch SW

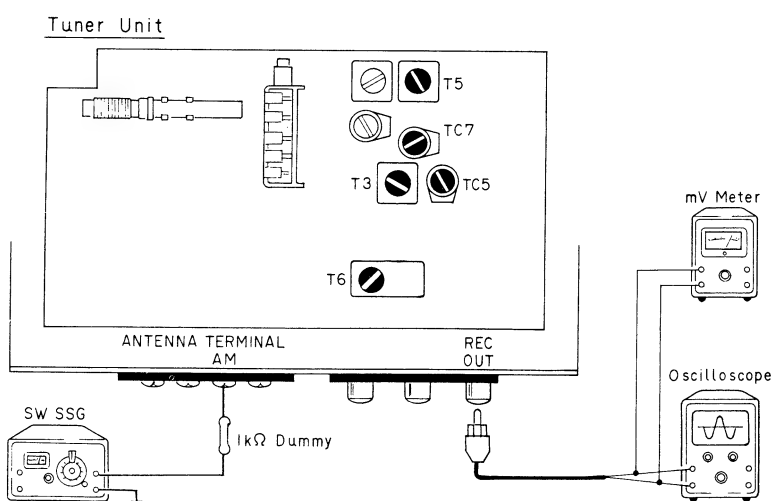
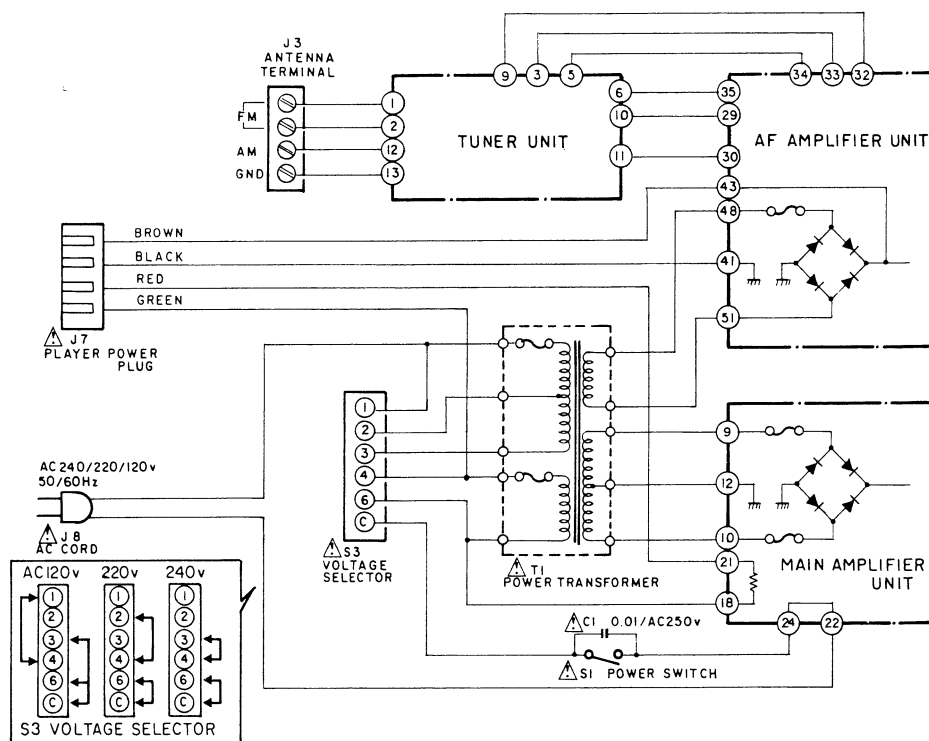


Fig. 2

● To Adjust

1. Set SSG at 400 Hz, 30% modulation.
2. Add the output signal of 7.3 MHz, 60 dB from SSG to the unit, and tune in to 7.3 MHz on the dial scale.
3. Adjust T5 so that the output will be maximum.
4. Add the output signal of 17 MHz from SSG to the unit, and tune in to 17 MHz on the dial scale.
5. Adjust TC7 so that the output will be maximum.
6. Repeat (2) ~ (5) above several times, and adjust the output to be maximum at 7.3 MHz, 17 MHz.
7. Set SSG to an output of 30 dB, and adjust the T3 (7.3 MHz) and TC5 (17 MHz) repeatedly so that its output level is highest at 7.3 MHz and 17 MHz.
8. Add the output signal of 12 MHz from SSG to the unit, and tune in to 12 MHz on the dial scale.
9. Adjust T6 for the output to be maximum.

SCHEMATIC CIRCUIT DIAGRAM (KH-8855)

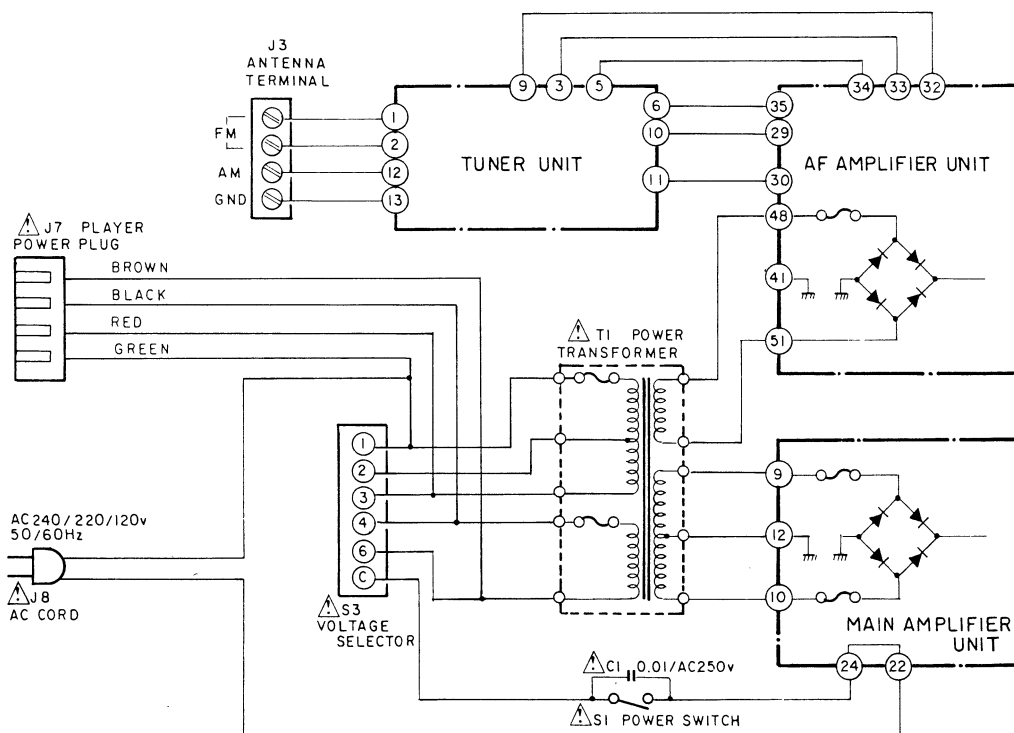


Note:

The Δ mark found on one component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Fig. 3

SCHEMATIC CIRCUIT DIAGRAM (KH-8811)

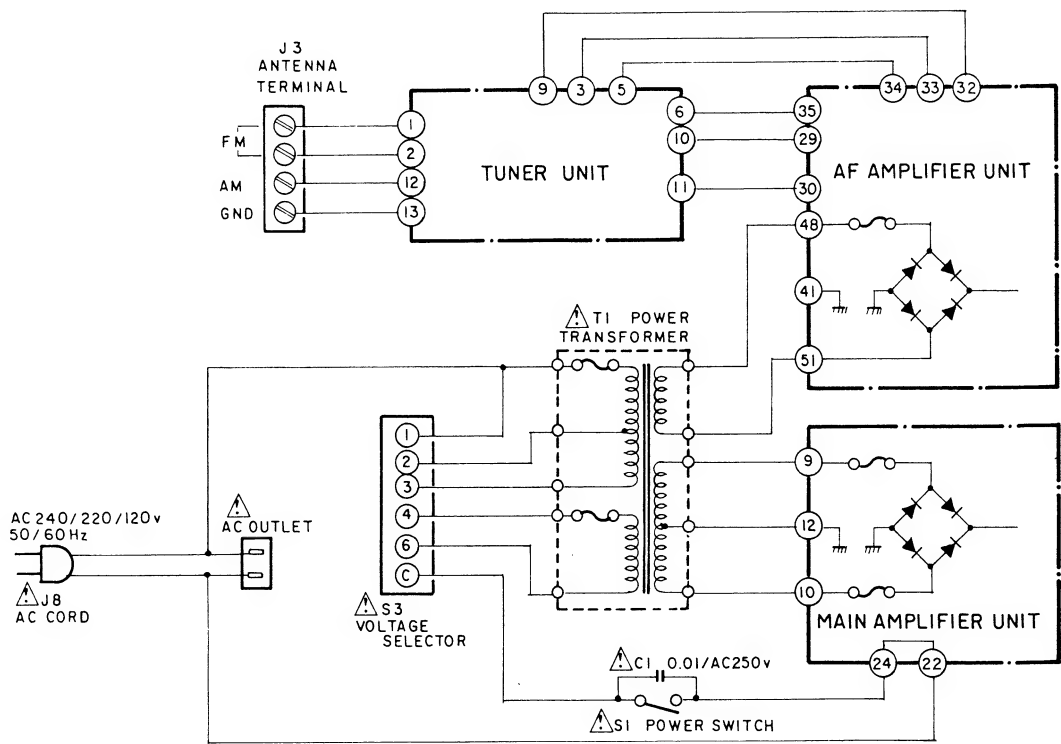


Note:

The Δ mark found on one component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Fig. 4

SCHEMATIC CIRCUIT DIAGRAM (KH-858•KH-818)



Note:
The ⚠ mark found on one component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Fig. 5

TUNER UNIT

KH-8855
KH-8811
KH-858
KH-818

TUNER UNIT

● Parts Connection

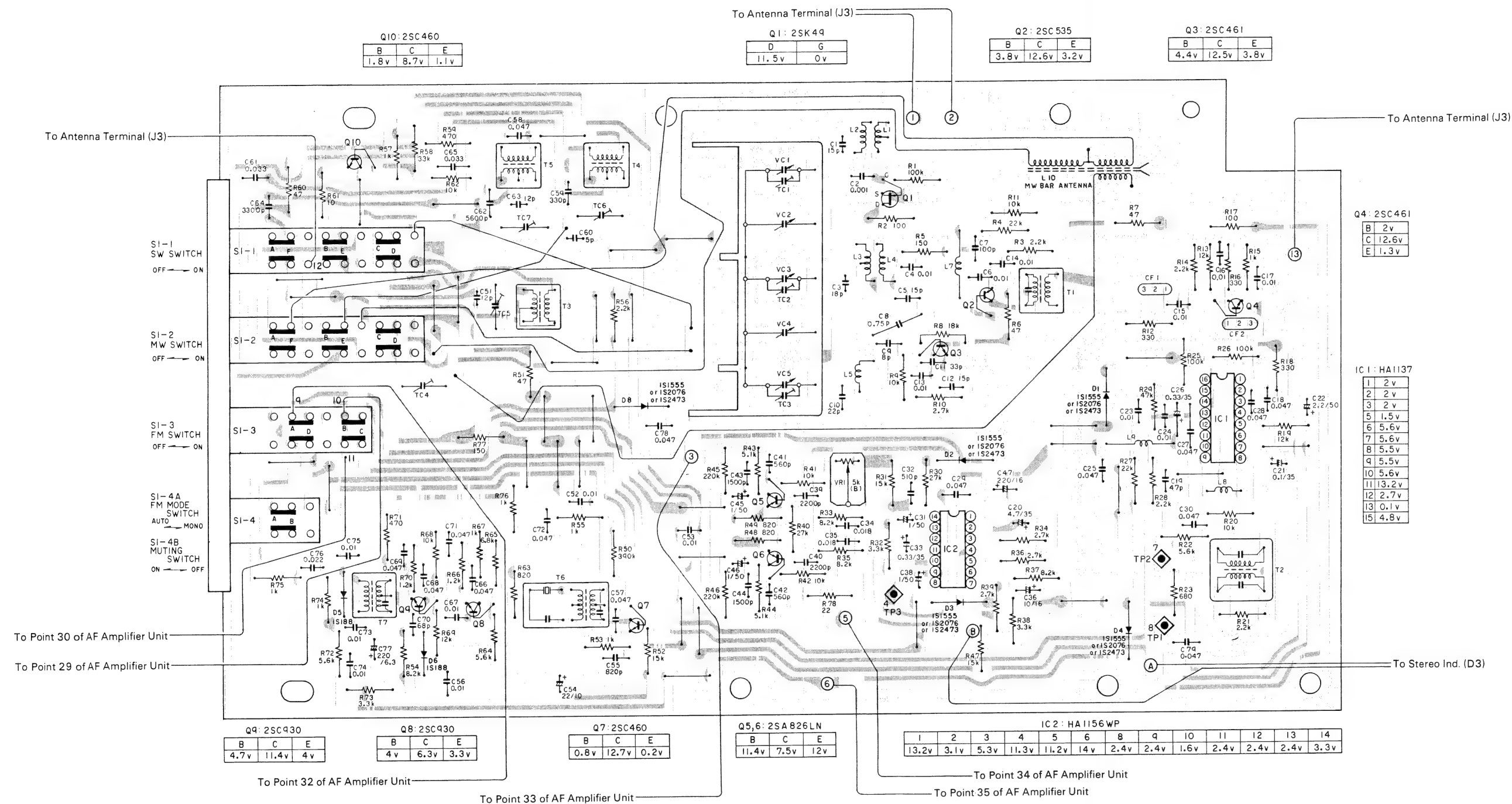


Fig. 7

The diagram illustrates a portable FM/AM radio circuit. Key components and their functions include:

- Power Supply:** A 13.2V battery (B1) provides power to the circuit. A 100k resistor (R1) and a 0.01F capacitor (C1) are used for decoupling.
- Tuning Eye:** Q1 (2SK49) and Q2 (2SC535) form a tuning eye circuit. Q1's emitter is grounded, and its collector is connected to the base of Q2. Q2's emitter is grounded, and its collector is connected to the base of Q3.
- Mixer/Oscillator:** Q3 (2SC461) is the mixer/oscillator. Its base is connected to the collector of Q2. The base of Q3 is also connected to the base of Q4.
- Detector/AF Amplifier:** Q4 (2SC461) is the detector/AF amplifier. Its base is connected to the collector of Q3. The base of Q4 is also connected to the base of Q5.
- Push-Pull Audio Output Stage:** Q5 (2SC461) and Q6 (2SA826NL) form a push-pull audio output stage. Q5's base is connected to the collector of Q4. Q6's base is connected to the collector of Q5. The emitters of Q5 and Q6 are connected to ground. The collectors of Q5 and Q6 are connected to the speaker (L10).
- Other Components:** The circuit includes a muting switch (S1-3A), an FM switch (S1-3B), a mono/auto switch (S1-3C), and a tuning eye switch (S1-3D). It also includes a 100k resistor (R1), a 0.01F capacitor (C1), and a 100k resistor (R2).

Fig. 6

● Parts List

NOTE:

When ordering resistors, first covert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	56×10 ¹	561.....	RD1/4PS	561 J
47kΩ	47×10 ³	473.....	RD1/4PS	473 J
0.5Ω	0R5		RN2H	0R5 K
1Ω	010.....		RS1P	010 K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ 562×10¹..... RN1/4SR 5621 F

MISCELLANEOUS

Part No.	Symbol & Description	
HA1137	IC1	
HA1156WP	IC2	
2SK49-H2	Q1	
2SC535-C	Q2	
2SC461-C	Q3, Q4	
2SA826LN	Q5, Q6	
2SC460-C	Q7	
2SC930-D	Q8, Q9	
2SC460-B	Q10	
1S1555	D1 — D4, D8	
(1S2076)		
(1S2473)		
1S188-FM1	D5, D6	
CTC-100	L1	Coil
CTC-117	L2	Coil
HTC-118	L3	Coil
CTC-102	L4	Coil
HTC-119	L5	Coil
VACANT	L6	
CTH-037	L7, L9	Coil
CTF-071	L8	Micro Inductor
HXA-111	L10	Antenna Unit
CTF-038	CF1, CF2	Ceramic Filter
CCP-057	VR1	Semi Fixed, 5kΩ (B)
HCK-101	TC1, TC2, VC1 — VC4,	Variable Condenser
CCG-026	TC4, TC6	Trimmer
CCG-025	TC5, TC7	Trimmer
CTC-073	T1	IF Transformer
CTC-074	T2	Coil
HTA-101	T3	Coil
CTB-040	T4	Coil
CTA-043	T5	Coil
CTE-085	T6	IF Transformer
CTE-001	T7	Coil
HSG-101	S1	Switch

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

RESISTORS

Part No.	Symbol & Description
RD1/8PS□□□J	R1 — R23, R25 — R78
VACANT	R24

CAPACITORS

Part No.	Symbol & Description
CCDUJ150K50	C1
CKDYB102K50	C2
CCDUJ180K50	C3
CKDYF103Z25	C4, C6, C13 — C17, C23, C24, C56, C67, C73 — C75
CCDCH150K50	C5, C12
CCDSL101K50	C7
CGBR75K500	C8
CCDLH080F50	C9
CCDLH220K50	C10
CCDCH330K50	C11
CKDYF473Z25	C18, C25, C27, C28, C30, C57, C58, C66, C68, C69, C71, C72, C78, C79
CCDSL470K50	C19
CEA4R7P35	C20
CSZA0R1M35	C21
CEA2R2P50	C22
CSZAR33M35	C26, C33
CQMA473K50	C29
CEA010P50	C31, C38, C45, C46

TUNER UNIT

Parts No.	Symbol & Description
CQSH511J50	C32
CQMA183K50	C34, C35
CEA100P16	C36
VACANT	C37
CKDYB222K50	C39, C40
CKDYB561K50	C41, C42
CKDYB152K50	C43, C44
CEA221P16	C47
VACANT	C48 — C50
CCDSH120F50	C51
CQMA103M50	C52, C53
CEA220P10	C54
CKDYB821K50	C55
CQSH331J50	C59
CCDSH050F50	C60
CQMA333M50	C61, C65
CQSH562K50	C62
CCDXK120J50	C63
CQMA332M50	C64
CCDSL680K50	C70
CQMA223K50	C76
CEA221P6R3	C77

List of changed parts information will be furnished whenever necessary and you are requested to amend parts number in this parts list.

List of Changed Parts for Factory Modification

Symbol	Part No.	Description

PARTS LIST

AF AMPLIFIER UNIT (KH-8855, KH-858)

KU		D	
Part No.	Symbol & Description	Part No.	Symbol & Description
RD 1/4PS154J	R63, R64	⇒	Deleted

AF AMPLIFIER UNIT (KH-8811, KH-818)

KU		D	
Part No.	Symbol & Description	Part No.	Symbol & Description
WZ-157	D10	WZ-135	D10
BZ-150	D11	BZ-130	D11
△ CEK-042	FU1 Fuse, 125V 1A	△ HEK-104	FU1 Fuse, 125V 1A
RD 1/4PS102J	R19, R20	RD1/4PS112J	R19, R20
RD 1/4PS183J	R21, R22	RD1/4PS153J	R21, R22
RD 1/4PS154J	R63, R64	⇒	Deleted
RD 1/4PS122J	R129	RD1/4PS821J	R129
RD 1/4PS181J	R130	RD1/4PS151J	R130
△ RS1P150K	R131	△ RN1P4R7K	R131
△ RS2P391K	R132	△ RS2P181K	R132
△ RS1P101K	R133	⇒	Deleted
CEA101P35	C93	CEA101P25	C93
		CCDSL820K50	C101, C102

PARTS LIST

MAIN AMPLIFIER UNIT (KH-8855, KH-858)

KU			D		
Part No.	Symbol & Description		Part No.	Symbol & Description	
△ CEK-043	FU1, FU2	Fuse, 125V 4A	△ HEK-105	FU1, FU2	Fuse, 125V 4A
△ RD1/2PS335J	R21		△ CKDYF103Z25	C24	

MAIN AMPLIFIER UNIT (KH-8811, KH-818)

KU			D		
Part No.	Symbol & Description		Part No.	Symbol & Description	
△ SI-1125H	IC		△ SI-1120H	IC	
△ ERC04-02AH	D1 - D4		△ SIB01-02	D1 - D4	
△ CEK-043	FU1, FU2	Fuse, 125V 4A	△ HEK-106	FU1, FU2	Fuse, 125V 3A
△ RD1/2PS335J	R21		△ CKDYF103Z25	C24	
△ RS2P123K	R22 (KH-8855)			Deleted	
△ HCH-103 or CCH-003	Electrolytic, 4700μ/35V		△ HCH-104 or CCH-041	Electrolytic, 4700μ/25V	

PLAYER UNIT (KH-8811)

● Circuit Diagram

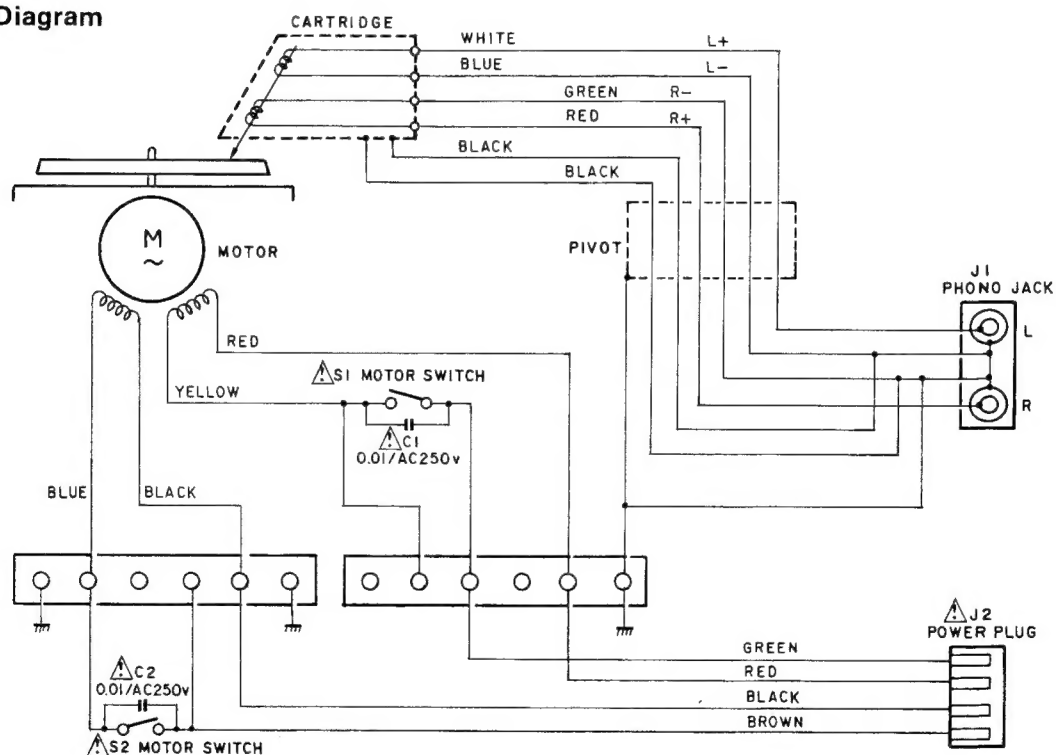


Fig. 8

● Parts List

MISCELLANEOUS PARTS LIST

Part No.	Symbol & Description	
HCL-103	C1, C2	Oil Filled Paper, 0.047/AC 1500V
HXM-106	M	Motor
HSF-104	S1, S2	Switch
HXA-141	J1	Jack, 2P
HKS-104	J2	Connector

PARTS LIST

MISCELLANEOUS PARTS LIST

KU			D		
Part No.	Symbol & Description		Part No.	Symbol & Description	
△ CCG-018	C1	Ceramic, 0.01/AC 125V	△ CCG-003	C1	Ceramic, 0.01/AC 250V
△ CTT-121	T1	Power, Transformer	△ HTT-101	T1	Power Transformer (KH-8855, KH-858)
			△ HTT-102	T1	Power Transformer (KH-8811, KH-818)
			⇒		
△ CSK-028	S1	Switch	△ CSK-032	S1	Switch
△ CDE-506	J7	Connector (KH-8833)	HKP-101	S3	Voltage Selector
△ CDG-030	J8	AC Cord		Deleted	
			△ HDG-103	J8	AC Cord

EXPLODED VIEW PARTS LIST

KU		D	
Part No.	Symbol & Description	Part No.	Symbol & Description
CXB-773	Escutcheon Assy (KH-8855)	HXA-107	Escutcheon Assy (KH-8855)
		HXA-108	Escutcheon Assy (KH-8811)
		HXA-198	Escutcheon Assy (KH-858)
		HXA-109	Escutcheon Assy (KH-818)
CXB-381	Hinge Unit	CXB-593	Hinge Unit (KH-8855, KH-8811)
HXX-106	Cover Unit	HXX-107	Cover Unit (KH-8855, KH-8811)
CBA-078	Screw	CBA-078	Screw (KH-8855, KH-8811)
		CBA-079	Screw (KH-8811)
CWE-256	Tuner Assy	HWE-101	Tuner Assy
CWK-195	Main Amplifier Unit	HWK-101	Main Amplifier Unit (KH-8855, KH-858)
CNV-705	Cover	HWK-113	Main Amplifier Unit (KH-8811, KH-818)
		HNV-149	Cover
		CKC-034	Lug
CWK-196	AF Amplifier AssY	CWK-196	AF Amplifier Assy (KH-8855, KH-858)
		CWK-198	AF Amplifier Assy (KH-8811, KH-818)
HNV-114	Lever	HAN-108	Lavel
HXA-102	Platter Mat Assy	HNV-115	Lever (KH-8855, KH-8811)
		HXA-104	Platter Mat Assy (KH-8855)
		HXA-105	Platter Mat Assy (KH-8811)
HXA-172	Accessory Assy	⇒ HXA-158	Accessory Assy (KH-8855)
HNV-144	EP Adaptor	HXA-159	Accessory Assy (KH-8811)
HXA-146	Headshell Assy	HNV-135	EP Adaptor (KH-8855, KH-8811)
		HXA-145	Headshell Assy (KH-8855)
		HXA-157	Headshell (KH-8855)
HXA-148	Cartridge Assy		Deleted
HPC-104	Cartridge		Deleted
HPC-105	Stylus	HPC-103	Stylus (KH-8855)
HNV-145	Stylus Cover	HNV-131	Stylus Cover (KH-8855)
HBN-104	Nut		Deleted
HNV-129	Spacer		Deleted
CRB-304	Owner's Manual	HDX-102	AM Antenna
		HRB-102	Owner's Manual (KH-8855)
		HRB-103	Owner's Manual (KH-8811)
		HRB-117	Owner's Manual (KH-858)
		HRB-104	Owner's Manual (KH-818)
CHB-334	Carton	HHA-106	Carton (KH-8855)
		HHA-107	Carton (KH-8811)
		HHA-171	Carton (KH-858)
		HHA-108	Carton (KH-818)

